RANGELY CARBON DIOXIDE PIPELINE

FINAL ENVIRONMENTAL IMPACT STATEMENT

FEBRUARY 1985

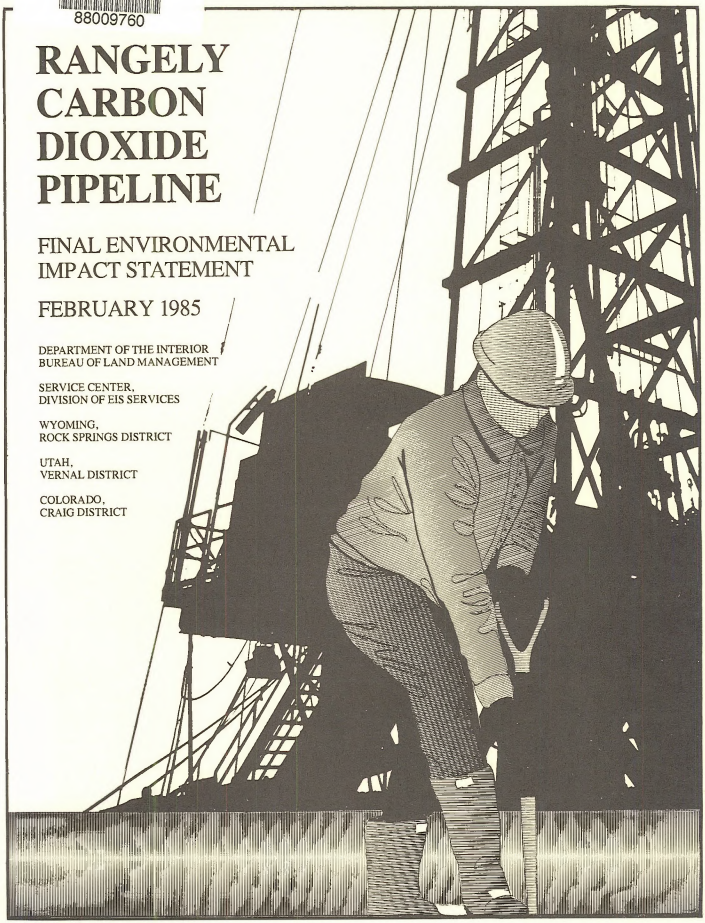
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SERVICE CENTER,
DIVISION OF EIS SERVICES

WYOMING,
ROCK SPRINGS DISTRICT

UTAH,
VERNAL DISTRICT

COLORADO,
CRAIG DISTRICT



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

IN REPLY
REFER TO:

Wyoming State Office
P.O. Box 1828
Cheyenne, Wyoming 82003

Dear Reader:

This abbreviated final Environmental Impact Statement (EIS) on the Rangely Carbon Dioxide Pipeline project is provided for your information and use. This volume is a supplement to the draft EIS, published on August 31, 1984, and contains a revised Summary and Required Federal Measures appendix. The final EIS also contains the following new material: description and analysis of the Proposed Action changes; description of the new Nightingale Meter Station Alternative; an Errata Summary, which contains corrections and additions to the draft EIS; comments received on the draft EIS; and responses to the comments. The draft EIS was not reprinted because no major revisions to the text or maps were required. (Some wildlife maps from the draft EIS were revised. Those maps were reprinted as blue-lines and may be obtained from the Bureau of Land Management (BLM) at the Rock Springs, Vernal, and Craig District Offices and the Kemmerer, Big Sandy/Salt Wells, and Meeker Resource Area Offices.)

The BLM would like to take this opportunity to thank the individuals and organizations who provided suggestions and comments on the draft EIS. Their help has been invaluable in preparing this final EIS.

Since this is an abbreviated final, the entire document to be considered for filing purposes and in the decision-making process consists of this volume and the draft EIS. Please see the draft EIS for more detailed analyses and descriptions of the Proposed Action and the Sand Wash Alternative.

Copies of the final EIS may be obtained from Janis L. VanWyhe, Bureau of Land Management, Division of EIS Services, 555 Zang Street, First Floor East, Denver, Colorado 80228. In addition, a limited number of copies of the draft may be obtained from the Rock Springs District Office.

The final EIS is not the decision document. The BLM decisions on the requested rights-of-way will be based upon the analysis contained in the final EIS, public concerns and comments, and other multiple-use resource objectives or programs applicable to the Rangely CO_2 pipeline project. Comments regarding the content of the final EIS may be sent to Donald Sweep, District Manager, Rock Springs District Office, P.O. Box 1869, Highway 187 N., Rock Springs, Wyoming 82901. Written comments will be considered in the decision if the comments are received by close-of-business, March 18, 1985. A Record of Decision that outlines the decisions and the rationale for the decisions will be prepared and made available through the Rock Springs District Office as soon as the decision is reached.

Sincerely Yours,

Hillary A. Oden

Hillary A. Oden
State Director
Wyoming State Office

BLM-YA-ES-85-002-5101

DEPARTMENT OF THE INTERIOR

FINAL ENVIRONMENTAL IMPACT STATEMENT ON THE RANGELY CARBON DIOXIDE PIPELINE

Prepared By

Bureau of Land Management
Division of EIS Services

FEBRUARY 1985

Hillary A. Oden
Director, Wyoming State Office

COVER SHEET

Rangely Carbon Dioxide Pipeline Project Environmental Impact Statement

( ) Draft (X) Final

Lead Agency

U.S. Department of the Interior
Bureau of Land Management

Cooperating Agencies

U.S. Department of the Interior
Bureau of Reclamation
Fish and Wildlife Service
National Park Service
U.S. Department of the Army
Corps of Engineers

Counties That Could be Directly Affected

Moffat and Rio Blanco counties, Colorado
Daggett and Uintah counties, Utah
Lincoln and Sweetwater counties, Wyoming

Abstract

The draft and final environmental impact statements (EISs) assess the environmental consequences of the federal approval of the Chevron USA, Inc. and Exxon Company USA, Rangely Carbon Dioxide Pipeline project.

Exxon Company USA proposes to construct and operate a 46.8 mile-long, 24-inch diameter pipeline, and Chevron USA, Inc., a 127-mile-long, 16-inch diameter pipeline beginning at the Shute Creek gas compressor station and ending at the Rangely Weber Sand Unit oil field in Colorado where the CO_2 would be used for enhanced oil recovery. Major components of the project would include the pipeline, a meter station (milepost 48.9), a booster station (Sand Wash Alternative only), a communication system, and Supervisory Control and Data Acquisition terminals.

The EIS analyzes the site-specific and cumulative effects of constructing, operating, and maintaining the CO_2 pipeline and ancillary facilities of the Proposed Action and Sand Wash Alternative. The EIS also addresses the Hightingale Meter Station and No-Action alternatives.

Based on the issues and concerns identified during the scoping process, the EIS focuses on potential impacts to socioeconomics, wildlife, water resources, soils, and vegetation. Direct and indirect impacts from the project as well as cumulative impacts are analyzed. Cumulative impacts are those that would occur from the Proposed Action or alternative plus other interrelated projects, existing or planned for development in the study area during the analysis period. In addition, the EIS analyzes impacts to five key issue areas--Red Creek Basin Escarpment, Jesse Ewing Canyon, Rye Grass Draw, McCort Canyon-Gap Creek, and Vermillion Bluffs.

EIS Contact

Comments on this EIS should be directed to:

Donald Sweep, District Manager
Rock Springs District Office
P.O. Box 1869
Highway 187 N.
Rock Springs, Wyoming 82901

(307) 382-5350
FTS 328-6011

Decision Process

The EIS is not a decision document. A Record of Decision will be prepared and made available to the public. Decisions on the use of public lands for this project will not be made until at least 30 days after the Environmental Protection Agency (EPA) Final EIS Notice of Availability has appeared in the Federal Register. During the 30-day period, written comments on the content of the EIS or concerns that should be considered in the decision process will be accepted at the address noted above. Comments received during this period will be considered in the decision-making process.

Date EIS Made Available to EPA and the Public

Draft: August 31, 1984
Final: February 8, 1985

The purpose of this final environmental impact statement (EIS) is to supplement the draft EIS which was published August 31, 1984. Reviewed together, the draft and final EISs incorporate the analyses of the affected environment and potential environmental consequences resulting from construction and operation of the Rangely Carbon Dioxide Pipeline project or Sand Wash Alternative.

This final EIS should not be considered as a complete EIS nor as a decision document. It contains a revised Summary and Required Federal Measures appendix. In addition, this final EIS contains a variety of new material. Chapter 1 contains analyses of the Proposed Action changes and a description of the Nightingale Meter Station Alternative. Chapter 2 is the Errata Summary; this chapter indicates text changes and additions to the draft EIS resulting from the comments received during the review period. Chapter 3, Consultation and Coordination, contains background information, consultation and coordination processes, and copies of comment letters received during the 60-day review period. All comment letters are reprinted verbatim and responses to individual comments follow immediately after each letter.

The receipt of an application for the following federal action initiated the preparation of the draft and final EISs: approval of right-of-way grants and permits across public land for the pipeline, block valves, a meter station, a booster station (Sand Wash Alternative only), a communication system, and Supervisory Control and Data acquisition terminals. The results of the analyses, as documented in this EIS and the draft, will be used for making decisions on whether to approve, modify, or disapprove the above requested actions.

The analyses in the draft EIS were based on the construction and operation of a 16-inch-diameter pipeline. During the public review of the draft EIS, the Bureau of Land Management was notified by Chevron USA, Inc. and Exxon Company USA (Exxon) that the two companies were going to modify the original application. Essentially, Exxon would now be responsible for building and operating the first 46.8 miles of the Rangely Carbon Dioxide pipeline. This segment of pipeline would be 24 inches in diameter and would begin at milepost 2.1 (Shute Creek gas compressor station). In addition, Exxon's segment would terminate at a newly proposed meter station (milepost 48.9).

The impacts identified in the EIS would still occur with implementation of the project, although 46.8 miles of the pipeline would be larger in diameter.

Editors Note: The Fish and Wildlife Service has formally requested an extension in order to complete its Biological Opinion; therefore, the Opinion could not be included as part of this EIS as originally planned. The Biological Opinion will, however, be included as part of the final decision-making process.

TABLE OF CONTENTS

Page

Summary 1

Major Issues. 2
Major Impact Conclusions. 2
Agency Preferred Alternative. 8

Chapter 1--Proposed Action Changes/Nightingale Meter Station Alternative. 11

Proposed Action Changes 11
Description of the Nightingale Meter Station Alternative. 15
Environmental Consequences. 15

Chapter 2--Errata Summary 21

Chapter 3--Consultation and Coordination. 41

Scoping Process 41
Draft EIS Consultation and Coordination 42
Public Review of the Draft EIS. 42
Comments and Responses. 45

Appendix 1--Special Federal Mitigation Measures, Reclamation Procedures, Company Standard Construction and Operation Procedures, and Other Measures Designed to Reduce Environmental Impacts (Appendix 3 of the draft EIS) 153

List of Tables, Maps, and Figures

Table 1--Comparative Analyses 4
Table 2--Agencies, Organizations, and Individuals Requested to Formally Review the Draft EIS 43
Table 3--Comment Letters. 46

Map 1--Project Location Map 13

Figure 1--Exxon's Proposed Meter Station Facility 12
Figure 2--Typical Configuration of a Single Pipeline Right-of-Way Configuration 16
Figure 3--Typical Configuration of Two Pipelines adjacent to Existing Pipeline 16

Summary

During the public review of the Rangely Carbon Dioxide Pipeline draft Environmental Impact Statement (EIS), the Bureau of Land Management (BLM) was notified by Chevron USA, Inc. (Chevron) and Exxon Company USA (Exxon) that the two companies were going to modify Chevron's right-of-way application. The original application was for a 176-mile-long, 16-inch-diameter pipeline to carry CO_2 from the Exxon compressor station of the Shute Creek natural gas processing plant in Sweetwater County, Wyoming to the Rangely Weber Sand unit oil field in Rangely, Colorado where the CO_2 would be used for enhanced oil recovery. Ancillary facilities include block valves, a meter station, a microwave communication system, a Supervisory Control and Data Acquisition (SCADA) system to detect leaks, and a booster compressor station (Sand Wash Alternative only).

In its letter of October 16, 1984, Exxon indicated that the first 46.8 miles of Chevron's original Proposed Action route would now be owned, built, and operated by Exxon. In addition, Exxon indicated that this segment of pipeline would be 24 inches in diameter, rather than the original 16 inches, to accommodate additional markets. Exxon's portion of the route would begin at the Shute Creek gas compressor station, 2.1 miles east of the main plant site. Therefore, this portion of the pipeline would begin at milepost (MP) 2.1, rather than the original MP 0.0. The first 2.1 miles have been analyzed in the Sweetwater County, Wyoming La Barge Expanded Plant Site Environmental Assessment available from the BLM Rock Springs District Office. (Please see Proposed Action Changes in Chapter 1 and letters from Chevron and Exxon in Chapter 3 for complete details on the modified proposal.)

CO_2 would be produced at the gas processing plant and carried at a rate of 200 million standard cubic feet per day under compression of 2,200 to 2,700 pounds per square inch. Eventually the CO_2 would be injected into oil-bearing strata at the Rangely Weber Sand Unit oil field on an alternating cycle: 1 month of CO_2 injection followed by 2 weeks of water injection. This cycle would force marketable oil and gas from surrounding wells.

The Proposed Action route would parallel existing roads and pipelines for 92 percent of its length. From MP 80 to MP 120, the pipeline would be built simultaneously with Chevron Chemical Company's proposed phosphate slurry pipeline.

Pipeline construction is scheduled to begin in the second quarter of 1985 and be completed during the fourth quarter of 1985. Operation is scheduled to begin on January 1, 1986 and continue for the life of the well field injection project, 12 to 16 years, or as long as economically feasible. After well field injection ends, the pipeline could be extended and used to carry CO_2 to other destinations. The pipeline would have a 30-to 35-year life.

In addition to the Proposed Action, the Sand Wash, Nightingale Meter Station, and No-Action alternatives were considered in the analysis. Maps in Appendix 1 of the draft EIS detail the locations and milepost numbers for the Proposed Action, Sand Wash Alternative, and related project facilities. See Chapter 1 of this EIS for locations of the revised Proposed Action and the Nightingale Meter Station Alternative.

MAJOR ISSUES

During the scoping process, several general concerns were raised relating to socioeconomics, wildlife, soils and vegetation, and water resources. Complete details on the scoping process are included in the Rangely Carbon Dioxide Pipeline: Public Scoping Results Document (BLM 1984a).

In addition to scoping concerns, the BLM believes the following key issue areas could most strongly be affected by the construction and operation of a CO_2 pipeline:

Red Creek Basin Escarpment

This area is located between MP 83.8 and 85.7 of the Proposed Action route near the northern edge of the Red Creek Watershed Area of Critical Environmental Concern (ACEC) and the Red Creek Badlands Wilderness Study Area (WSA). The Red Creek Basin Escarpment contains (1) a resistant sandstone ledge about 8 to 12 feet thick; (2) steep, sparsely vegetated sideslopes and badlands; and (3) strongly sloping to steep sideslopes (15 to 30 percent), vegetated with pinyon-juniper and a low-density understory of grasses and forbs.

Jesse Ewing Canyon

This narrow canyon, between MP 99.8 and 102 of the Proposed Action route, contains springs, an intermittent stream, county road, MAPCO liquid hydrocarbon pipeline, and slopes ranging from 9 to 28 percent. The canyon is bordered by steep mountain sideslopes (30 to 65 percent).

Rye Grass Draw

This area, MP 109.9 and 111.4 of the Proposed Action route, consists of a concave, mountain drainageway with slopes ranging from 9 to 28 percent. Portions of the draw with steeper (15 to 28 percent) slopes are usually narrow and bordered by steep mountain sideslopes (30 to 60 percent).

McCort Canyon-Gap Creek

This area, MP 82 and 85.3 of the Sand Wash Alternative route, consists of a perennial stream with a narrow drainageway bordered by strongly sloping and steep sideslopes (15 to 30 percent). Springs occur throughout the area; Iron Springs would be within the right-of-way.

Vermillion Bluffs

This area is located between MP 127.5 and 131.1 of the Sand Wash Alternative route and within the Lookout Mountain potential ACEC. Vermillion Bluffs has several sensitive plant species, rare plant communities, and high scenic values.

MAJOR IMPACT CONCLUSIONS

The analysis of the Rangely CO_2 Pipeline Project focuses on impacts caused by (1) displacing resources (such as removing of vegetation during construction), (2) using

resources (such as workers and equipment to create needs for increased housing and expanded infrastructures), and (3) creating other changed conditions (such as increased visual disturbances). The analysis reveals that the impacts from this project could be managed without undue degradation to other natural resources. This project would cause some short-term, construction-related impacts, which are assessed in this and the draft EISs. Impacts judged to be of public interest are compared in Table 1, Comparative Analysis of Mitigated Impacts between the Proposed Action and Sand Wash Alternative.

(No significant impacts would occur to mineral resources, sole sources of drinking water, prime and unique farmlands, or health and safety from implementation of the Proposed Action, Sand Wash Alternative, or Nightingale Meter Station Alternative.)

Socioeconomics

Construction of the Proposed Action would not cause any significant, direct impacts because all impacts would be less than identified in the significance criteria. However, operation of the Proposed Action would cause significant, direct, beneficial impacts to economies affected by the Rangely Weber Sand Unit oil field for the following reasons:

> The Proposed Action would allow oil production increases of 28 percent in Rio Blanco County and 14 percent in Colorado.
>
> Oil-related tax revenues would be increased by 18 percent in Rio Blanco County, 26 percent in Rio Blanco County School District 4, and 10 percent in Rangely.
>
> By extending the unit's life, the Proposed Action would postpone a 15 percent population loss in Rangely and equivalent losses in employment, income, business activity, and tax revenues.

Combined with the interrelated projects, the Proposed Action would contribute to the following significant, short-term (8-month-long), cumulative impacts:

> Population growth of 10 percent in Rock Springs;
>
> Employment growth of 8 percent and personal income growth of 9 percent in Sweetwater County; and
>
> Tax revenue growth of 12 percent in Lincoln County.

Cumulative impacts to housing, infrastructure, and the quality of life would not be significant because Rock Springs and Sweetwater County have sufficient housing and infrastructure and previous experience in handling growth problems.

Impacts from the Sand Wash Alternative would be similar to those identified for the Proposed Action except that cumulative population growth in Rock Springs would be 10 percent, cumulative growth in Sweetwater County would be 9 percent, and cumulative personal income growth in Sweetwater County would be 10 percent.

Wildlife

The Proposed Action would cause no significant, long-term impacts to wildlife because of the wildlife mitigation measures outlined in Appendix 1. Wildlife forage losses

TABLE 1

COMPARATIVE ANALYSIS
OF MITIGATED IMPACTS
BETWEEN THE PROPOSED ACTION AND THE SAND WASH ALTERNATIVE

ELEMENT	PROPOSED ACTION	SAND WASH ALTERNATIVE (*)
TOTAL LENGTH OF PIPELINES - Miles	176	211 (+35)
ENERGY USE - Btu's/hour	136,520,000	139,933,000 (+3,413,000)
SOCIOECONOMICS		
Population increase		
Rock Springs	270	370 (+100)
Rangely	40	45 (+ 5)
Vernal	140	70 (-70)
Total Personal Income ($000)		
Sweetwater County	$7,860	$9,880 (+$2,020)
Uintah County	5,030	2,060 (-2,970)
Rio Blanco County	1,160	1,560 (+400)
Local Government Revenue ($000)		
Lincoln County	18	18 (0)
Rio Blanco County	1,530	1,530 (0)
Rangely	180	180 (0)
Rio Blanco County School District 4	1,335	1,334 (-1)
Moffat County	0	65 (+65)
Moffat County School District	0	125 (+125)
Uintah County	29	0 (-29)
Uintah County School District	104	0 (-104)
Daggett County School District	30	0 (-30)
WILDLIFE		
Pronghorn Habitat Disturbance - Acres		
Winter, year-round, fawning	360	240 (-120)
Winter, year-round	786	744 (-42)
Summer, fawning	120	180 (+60)
Mule Deer Habitat Disturbance - Acres		
Winter, year-round, fawning	240	108 (-132)
Winter, year-round	786	744 (-42)
Elk Habitat Disturbance - Acres		
Winter, year-round, fawning	48	0 (-48)
Winter, year-round	612	420 (-192)
Raptors		
within 2 miles of known nests	52 miles	45 miles (+7)
Sage grouse Habitat Disturbance - Acres		
lek and nesting habitat	492	516 (+24)
Prairie Dog Habitat Disturbance - Acres		
Colonies	348	612 (+264)
Endangered Species		
Black-footed ferret	May be Affected	May be Affected
Bald Eagle	No Impact	No Impact
Peregrine Falcon	No Impact	No Impact
Whooping Crane	No Impact	No Impact
Colorado Squawfish	May be affected at	May be affected at
Humpback Chub	the Green River crossing crossings (MP 38 and 143)	the Green River crossing (MP 38) and at the Yampa River crossing (MP 160)
SOILS AND VEGETATION		
Acres Soils Disturbed (1 year) and Acres Vegetation Disturbed (2-5 years)	1,992	2,535 (+543)
Acres Removed/Soils and Vegetation (30 years)	0	3 (+3)
Acres of "Sensitive Areas"**	1,114	1,492 (+378)
WATER RESOURCES		
St. Jn Crossings		
Green River	3	1 (-2)
Yampa River	0	1 (+1)
Little Snake River	0	1 (+1)
Perennial Streams	2	6 (+4)
Areas Critical to Watershed Management		
Red Creek Basin Escarpment	1	N/A
Richards Gap	1	N/A
Jesse Ewing Canyon	1	N/A
McCort Canyon-Gap Creek	N/A	1

TABLE 1 (Continued)

COMPARATIVE ANALYSIS
OF MITIGATED IMPACTS
BETWEEN THE PROPOSED ACTION AND THE SAND WASH ALTERNATIVE

ELEMENT	PROPOSED ACTION	SAND WASH ALTERNATIVE	(*)
AGRICULTURE			
Grazing Loss - AUM/2-5 years	136	194	(+53)
Grazing Allotments - Number Affected	27	24	(-3)
Cropland Loss - Acres/1 Year	11	14	(+3)
VISUAL RESOURCES* **			
Acres Significantly Affected			
VRM Class II	113	94	(-19)
VRM Class III	40	33	(-7)
VRM Class IV	0	40	(+40)
VRM Class V	0	0	(0)
CULTURAL RESOURCES			
Number of Known Cultural Sites within a 1-Mile-Wide Corridor along the Pipeline	120	106	(-14)
RECREATION			
Impacts to Recreation Resources and Quality of Recreation Experiences	Impacts to river running experiences on the Green River would be temporary (portions of 7 days) during pipeline construction. Dispersed Recreation demand generally would increase insignificantly in 1985 during construction.	Dispersed recreation demand generally would increase insignificantly in 1985 during construction.	
WILDERNESS			
Wilderness Study Areas Affected	Red Creek Badlands	Skull Creek Willow Creek Cross Mountain	
TRANSPORTATION NETWORKS			
Change in Traffic Flow Conditions			
FEDERAL	significant-short term	None	
STATE	significant-short term	insignificant-short term	
COUNTY	significant-short term	insignificant-short term	
PRIVATE	significant-short term	insignificant-short term	
Traffic Delay	Jesse Ewing Canyon, Browns Park, and Utah State Highway 149	None	
PALEONTOLOGICAL RESOURCES			
Known Sites where Paleontological Resources have been Found	1	None	(-1)
CONFLICTS WITH MINERAL LEASES			
Oil and Gas Leases	Yes	Yes	(0)
Trona Leases	Yes	Yes	(0)
Coal Leases	No	Yes	(+)

Note: MFPs = Management Framework Plan; AUM = animal unit month; mg/l = milligrams per liter; ($000) = thousands of dollars; NA = not applicable.

- indicates less than the Proposed Action; + indicates more than the Proposed Action.

*Figures inside parentheses represent the difference between the Proposed Action and the alternative.

**Refer to Chapter 2 Soils and Vegetation section of the draft EIS for definitions and descriptions of sensitive areas.

***Refer to Appendix B of the draft EIS for definitions of terms.

The Proposed Action Meter Station and Nightingale Meter Station Alternative would each affect 1 acre of land designated as Class III.

would be short term. A pipeline break or leak would not significantly affect fish. The automatic block valves with electric SCADA detection systems placed at Green River crossings would limit the amount of CO_2 released into the river in the event of a pipeline leak to less than 15 parts per million (ppm). The buffering capacity of the Green River would further limit the amount of CO_2 which would go into solution. Both the SCADA systems and the natural buffering would limit the level of CO_2 to a point where it would not be lethal to fish.

Impacts from the Sand Wash Alternative would be similar to those from the Proposed Action except for the acreages of habitat affected. Cumulative impacts to wildlife would not occur from either the Proposed Action or the Sand Wash Alternative when added to the interrelated projects.

Soils and Vegetation

Soil loss and reduction of soil productivity capacity from the Proposed Action and the Sand Wash Alternative would be insignificant because the erosion control, reclamation, and revegetation program outlined in Appendix 1 of this EIS would be effectively used to restore the soil to preconstruction productivity capacity. Accelerated wind and water erosion would cause some unquantifiable soil loss until erosion control measures are implemented.

Impacts to vegetation would generally be insignificant. Understory vegetation is expected to return to near-preconstruction densities within 5 years after construction through the use of the erosion control, reclamation, and revegetation program outlined in Appendix 1. Significant impacts could occur in low precipitation zones (less than 9 inches annually) if more than 5 years was required to establish adequate understory vegetation or if halogeton and other invader plants exceeded 10 percent of the plant cover. Grasses, however, could still be reestablished within 5 years through the use of intensive erosion control and revegetation measures.

Water Resources

The Proposed Action would not directly or cumulatively affect the flow or salinity of the Green River. The pipeline would affect two areas critical to watershed management that would require special construction and rehabilitation techniques: Richards Gap and Red Creek Basin Escarpment.

Other components of the Proposed Action would cause no significant impacts. Construction and operation of a pipeline along the Proposed Action route would not affect floodplains.

Construction and operation of the Sand Wash or Nightingale Meter Station alternatives would not significantly affect water resources, nor would they when combined with interrelated projects.

Agriculture

Construction and operation of the Proposed Action or Sand Wash or Nightingale Meter Station alternatives would not significantly affect agriculture nor cause any significant long-term conversion of grazing land or cropland.

Visual Resources

Vegetative clearings needed for the Proposed Action pipeline would create visual contrasts that would conflict with Visual Resource Management (VRM) objectives for the following classes and acreages: VRM Class II--113 acres and VRM Class III--40 acres. Additional impacts would be caused from construction of facilities, such as the meter station, power distribution lines, and the antennas that would be added to existing microwave stations. The Sand Wash Alternative would create visual contrasts that would conflict with VRM objectives for the following classes and acreages: VRM Class II--94 acres, VRM Class III--33 acres, and VRM Class IV--40 acres. The Nightingale Meter Station Alternative would conflict with 1 acre of VRM Class III objectives.

Cultural Resources

Because the exact locations of the pipeline and ancillary facilities are unknown for either the Proposed Action or the Sand Wash Alternative routes, specific impacts cannot be predicted. Effective use of the cultural survey and compliance procedures described in Appendix 1 should prevent significant, adverse cultural resource impacts.

Recreation Resources

Impacts to dispersed recreation opportunities and demand upon developed recreation sites would be insignificant from both the Proposed Action and the Sand Wash Alternative. The road and pipeline crossing at MP 160.5 of the Sand Wash Alternative route could become a take out or put in point for kayakers, fishermen, or hunters recreating along the Yampa River.

Wilderness

Pipeline construction and operation would not significantly affect the wilderness resource base along the Proposed Action route. Sights, sounds, and dust from simultaneous pipeline construction along the northwest boundary of Red Creek Badlands WSA could diminish the quality of primitive and unconfined recreation within a small portion of the WSA from 4 to 6 weeks.

Similiar impacts (1 to 2 weeks) could occur from construction of the Sand Wash Alternative route along the boundaries of the Cross Mountain, Skull Creek, and Willow Creek WSAs. In addition, power distribution lines to the SCADA terminal at the Yampa River crossing, MP 160, could be seen from the Cross Mountain WSA.

Transportation Networks

Pipeline construction would significantly but temporarily increase traffic volume and impede traffic flow on roads that would serve as access to the Proposed Action and Sand Wash Alternative routes. Existing pipelines that would be paralleled by the Proposed Action could be disrupted by construction if accidental damage occurred. Increases in vehicle miles on specific roadways could increase traffic accidents, thereby increasing the risk to traveler health and safety. The use of the dirt roadways during wet weather could damage roadbeds.

Air Quality

Pipeline construction along the Proposed Action and Sand Wash Alternative routes would temporarily and insignificantly increase dust and gaseous ambient air concentrations. These impacts

would be localized, would not affect regional air quality, and would be dispersed over a large area.

Paleontological Resources

During construction of the MAPCO pipeline below the Red Creek Escarpment, an important fossilized crocodile skull was discovered.

The potential exists for more fossils to be discovered during construction of the Proposed Action or Sand Wash Alternative, since both routes would cross formations that typically yield significant paleontological resources.

Land Use Conflicts and Constraints

The Proposed Action and Sand Wash Alternative would cross several areas currently leased for oil and gas, and trona. Care would be needed during construction to avoid inadvertent damage to the existing small pipelines on the oil and gas fields. Little or no potential exists for subsidence in the trona leases triggered by pipeline construction activities. However, for about 7 miles (where the pipeline crossed mineable trona), the mining companies would have to take extra precautions to preclude subsidence, thus adding to the restricted mining area.

The Sand Wash Alternative would cross the Bean Springs Coal Preference Right Lease Area (PRLA) which is currently under consideration for leasing. The pipeline could cause potential interference with future mining operations. However, these could be worked out with the companies involved.

With construction of the project, certain corridors (such as those through Richards Gap and Jesse Ewing Canyon) would be filled to the point where other additional pipelines could not be accommodated without causing significant environmental disturbance. Therefore, future applications for pipeline rights-of-way through the area from Richards Gap to the head of Rye Grass Draw would not be accepted.

The Proposed Action and Sand Wash Alternative routes would not conflict with any other land use plans.

AGENCY PREFERRED ALTERNATIVE

The BLM Agency Preferred Alternative is:

- Pipeline--Proposed Action, as proposed by Chevron USA, Inc. and Exxon Company USA. (The CO_2 pipeline would have to be built during the same year as Chevron Phosphate Project. The Proposed Action would also have to be built simultaneously with the phosphate pipeline from the top of the Red Creek Escarpment to the head of Rye Grass Draw.)
- Meter Station--Nightingale Meter Station Alternative.

Chapter 1

Proposed Action Changes and Description of the Nightingale Meter Station Alternative

PROPOSED ACTION CHANGES

Facilities

During the public review of the Rangely Carbon Dioxide Pipeline draft Environmental Impact Statement (EIS), the Bureau of Land Management (BLM) was notified by Chevron USA, Inc. (Chevron) and Exxon Company USA (Exxon) that the two companies were going to modify Chevron's original right-of-way application. The original application was for a 176-mile-long, 16-inch-diameter pipeline to carry CO_2 from the Exxon compressor station of the Shute Creek natural gas processing plant in Sweetwater County, Wyoming to the Rangely Weber Sand unit oil field in Rangely, Colorado.

In its letter of October 16, 1984, Exxon indicated that the first 46.8 miles of Chevron's original Proposed Action route would now be owned, built, and operated by Exxon. In addition, Exxon indicated that this segment of pipeline would be 24 inches in diameter, rather than the original 16 inches, to accommodate additional markets. Exxon's portion of the route would begin at the Shute Creek gas compressor station, 2.1 miles east of the La Barge gas plant site. Therefore, this portion of the pipeline would begin at milepost (MP) 2.1, rather than the original MP 0.0. The first 2.1 miles have been analyzed in the Sweetwater County, Wyoming La Bargo Expanded Plant Site Environmental Assessment. The Environmental Assessment, which is available for review at the BLM, Rock Springs District Office, also analyzed the Shute Creek Gas Compressor Station.

Exxon's pipeline segment would terminate at a proposed meter station at MP 48.9 near Rock Springs, Wyoming. (See Figure 1 for diagram of the meter station and Map 1 for project location.) The meter station would consist of a 1-acre fenced area, enclosing a control building, about 40 by 80 feet; a communications antenna; a scraper receiver; a remote-controlled block valve; and provisions for a future take-off valve. The control building would house a primary orifice meter, a backup meter, and space for a third meter.

Outside Exxon's fenced area, Chevron would have another fenced area enclosing a scraper launcher. No new access roads would be needed since the site would be adjacent to the frontage road on the north side of Interstate Highway 80. Also, no additional power source would be needed because a 34.5 kV power line crosses within 200 yards of the site.

In addition to the meter station, the following project facilities for Exxon's segment of the Proposed Action route are proposed:

MP 2.1 (Shute Creek gas compressor station): communications and control center for Exxon's Supervisory Control and Data Acquisition (SCADA) system.

MP 2.3: motorized, remote-controlled block valve and scraper trap,

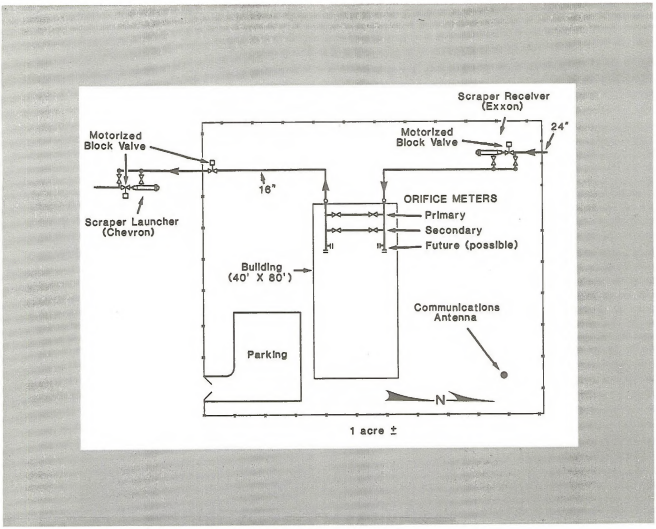
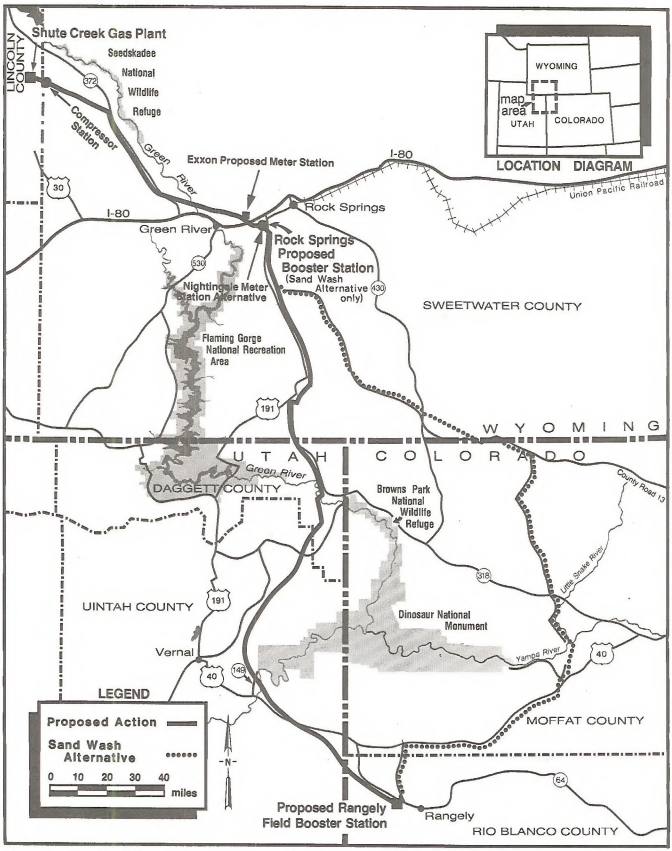


Figure 1 Exxon's Proposed Meter Station Facility

0.2 mile downstream from the meter station facilities. (A 0.2-mile-long, 440 volt, distribution line would extend from the meter station.)

MP 16.5: motorized, locally operated block valve, powered by a 100-yard-long, 480 volt, three-phase wood pole distribution line. One creosote pole, about the size of a telephone pole, and a smaller utility pole at the block valve would be needed to support the lines.

MP 27: motorized, locally operated block valve, powered by a 100-yard-long, 480 volt, three-phase wood pole distribution line and an underground valve at a take-off point for a future pipeline.



Map 1 Project Location map

MP 37.8 and 38.5: two motorized block valves would be locally operated upstream and downstream of the Green River pipeline crossing. The first block valve (MP 37.8) would be served by a 200-yard-long, 230 volt, single-phase distribution line. The other block valve would be powered by an electric conduit installed with the pipeline across the river. Two creosote poles, about the size of telephone poles, and a smaller utility pole would be needed to support the lines.

Only the proposed meter station would cause disturbance outside the 100-foot right-of-way construction width--1 acre more than the original Proposed Action, for a total of 1,993 acres.

Chevron recently modified its application to begin at Exxon's proposed meter station site (MP 48.9). The modified application is the same as the original except that the scraper trap; SCADA terminal; block valve; 0.5-mile-long, 15 kV distribution line; and 0.5-mile-long access road (MP 52) have been deleted and replaced by a scraper launcher located immediately adjacent to Exxon's meter station.

Construction

The construction procedures and schedule for the Exxon and Chevron proposed pipelines would be the same as previously proposed by Chevron except for the following differences:

1. The stretches of pipeline for the originally proposed three construction spreads would be different than identified on page 20 of the draft EIS. Exxon's Spread 1 (MP 2.1 to MP 48.9) would need 155 workers. Chevron's Spread 2 (MP 48.9 to MP 176 at the Rangely Weber Sand Unit oil field, excluding MP 67 to MP 123), would need 215 workers. Chevron's Spread 3 would be a small specialized spread with 77 workers who would simultaneously build the proposed pipeline and the Chevron phosphate pipeline (MP 67 to MP 123--the area from the top of the Red Creek Escarpment, down to the Green River, and up to the head of Rye Grass Draw). Thirteen more workers would be needed for this proposal compared with those needed for the original proposal (447 versus 434 workers). Because the differences in construction locations and number of workers would be relatively small, no new analysis on socioeconomic impacts were deemed necessary.

2. Previously, two pipeline storage yards were proposed--one at Vernal, Utah, and the other at Rock Springs, Wyoming. Now, two pipeline welding and storage yards would be located at Rock Springs, Wyoming: one for Exxon's portion of the line, the other for Chevron's. The pipe and equipment for Spread 1 would be hauled by truck from Rock Springs using Interstate Highway 80 and Wyoming State Highway 372. Pipe and equipment for Spreads 2 and 3 would be hauled from Rock Springs using Interstate Highway 80, U.S. Highways 191 and 40, Utah State Highway 149, and Colorado State Highway 64. Various unnumbered county and private gravel and dirt roads would be used for all spreads to provide access from the major roads to the project right-of-way.

3. The Proposed Action and Chevron phosphate pipelines through Jesse Ewing Canyon would follow the existing county road and parallel the MAPCO pipeline. (See Figures 2 and 3 for typical configurations of pipeline rights-of-way.) The proposed pipeline would be buried in the shoulder of the road opposite the MAPCO pipeline. To maintain a grade that would not exceed 15 percent (a requirement for the Chevron phosphate pipeline), some cutting and filling of the existing road surface would be required. No construction and waste materials would be allowed to enter the existing stream channel in the Canyon. For about 150 feet, where the road is particularly narrow, a retaining wall would be built between the road and the drainage to prevent material from entering the stream channel.

   Originally, the pipelines were to be built away from the county road, where construction would have interfered with the traffic at two points (where the pipelines crossed the county road). Vehicle access through Jesse Ewing Canyon during construction of the modified proposal would be allowed periodically throughout each day and at the end of each shift, as required by Daggett County. However, the contractor would allow emergency vehicle access up or down the Canyon whenever necessary, as stated in Appendix 1.

Operation

The SCADA system for Exxon's part of the CO_2 pipeline would be essentially the same as Chevron's SCADA system in that both would be run by a combination of computers and operator personnel who would be present 24 hours a day, 7 days a week. The proposed SCADA systems for both companies are basically equal in their capacity to collect data and detect problems, including leaks, and both are essentially "state-of-the-art".

DESCRIPTION OF THE NIGHTINGALE METER STATION ALTERNATIVE

The Nightingale Meter Station Alternative is an alternative location to Exxon's proposed meter station (MP 48.9). The alternative meter station, to be located at MP 52, would also disturb 1 acre more than the original Proposed Action. The alternative location would require a 0.5-mile-long access road; power would be supplied by a 0.5-mile-long, 15 kV distribution line that would follow the access road. Other facilities for the alternative meter station would be the same as described for the modified Proposed Action.

ENVIRONMENTAL CONSEQUENCES

This section contains an analysis of the effects of the Proposed Action changes to visual resources and transportation networks. No significant changes to other resources would occur from the changes; therefore, no other resources are analyzed for potential impacts. All previous analyses identified in the draft EIS would remain the same.

Visual Resources

The Proposed Action meter station (MP 48.9) would significantly affect 1 acre of land designated Visual Resource Management (VRM) Class III. The addition of

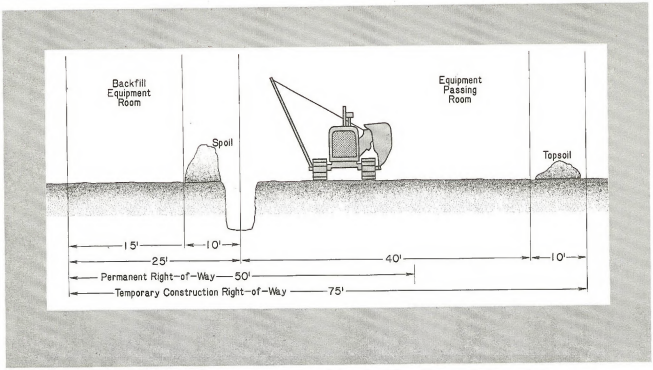


Figure 2 Typical Configuration of a Single Pipeline Right-of-Way

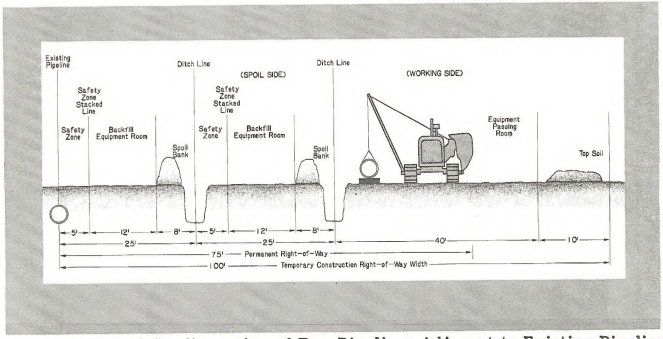


Figure 3 Typical Configuration of Two Pipelines Adjacent to Existing Pipeline

structures (building, fence, and antenna) would create a significant visible impact as viewed in the foreground from Interstate Highway 80.

Similarly, the Nightingale Meter Station Alternative (MP 52) would significantly affect 1 acre of land designated as VRM Class III. (See Appendix 8 of the draft EIS for definitions of terms and explanation of significance.) The alternative would cause long-term visual impacts by creating additional contrasts on the landscape by placing the building, fence, and power distribution line among similar, existing facilities. These structures would be seen as middleground from Interstate Highway 80 and US Highway 191.

Transportation Networks

The significance criterion of "existing roads being blocked for longer than 15 minutes could be expected during construction along 3 more miles of county road in Jesse Ewing Canyon (MP 99.5 to 105.5). However, vehicle access through the Canyon would be allowed periodically throughout each day and at the end of each shift, as required by Daggett County. No additional impacts to transportation would occur from the Proposed Action changes.

The Nightingale Meter Station Alternative would not change the transportation network analysis identified in the draft EIS.

Chapter 2

Errata Summary

The following revisions have been made based on comments received during the Rangely Carbon Dioxide Pipeline draft environmental impact statement. The specific text changes follow. Large text additions to DEIS Appendices are shown following text changes. Additions to tables in the draft EIS are included as the final section of the Errata Summary.

Page	Col.	Para.	Line	IS	SHOULD BE
5	R	5	3	176-mile-long, 16-inch diameter CO_2 pipeline;	46.8 mile-long, 24-inch diameter pipeline; 127-mile-long, 16-inch diameter pipeline;
7	L	1	1-7	This chapter of the Environmental Impact Statement (EIS) describes the Chevron USA, Inc. (Chevron) proposal to construct, operate, and maintain a 176-mile-long 16-inch diameter pipeline, from the Exxon Company USA (Exxon) compressor station in Sweetwater County, 7 miles south of Fontenelle (Painter's Store), Wyoming to Rangely, Colorado.	This chapter of the Environmental Impact Statement (EIS) describes the Chevron USA, Inc. (Chevron) proposal to construct, operate, and maintain a 127-mile-long, 16-inch diameter pipeline, and Exxon Corporation (Exxon), a 46.8-mile-long, 24-inch diameter pipeline beginning at the Shute Creek gas compressor station and ending at the Rangely Weber Sand Unit oil field in Rangely, Colorado. (Complete details of the modified pipeline project are contained in Chapter 1 of this final EIS.)
		2	1-2	The first 26.5 miles of the proposed pipeline could potentially become a common carrier pipeline and be enlarged to over 24 inches in diameter.	The first 46.8 miles of the proposed pipeline would be enlarged to 24 inches in diameter.
14	R	1	1-4	N/A	Add: During the public review of the draft EIS, Chevron USA, Inc. and Exxon Company USA modified the original right-of-way application. (See Chapter 1 of this final EIS for details.)
		2	3-5	The CO_2 would be produced at the Exxon La Barge gas plant as a by-product of methane cracking.	The CO_2 would be produced at Exxon's Shute Creek plant, as one of several products, and in the drill field, produced in quantities exceeding methane production.

Page	Col.	Para.	Line	IS	SHOULD BE
14	R	2	10	-no more than 20 pounds of water per million.	-no more than 14 pounds of water per million.
		3	--	N/A	Add: On October 16, 1984, Exxon, with concurrence from Chevron, submitted a letter of modification to Chevron's right-of-way application which would increase the size of the pipeline to 24 inches in diameter and modify ownership so that Exxon would build, own, and operate the pipeline from MP 2.1 to MP 48.9. Additional details are addressed in Chapter 1 of this EIS.
		5	8-11	Scraper trap, SCADA terminal, and block valve, plus a 0.5-mile-long, 15 kV distribution line and a 0.5-mile-long access road to MP 52 near Rock Springs;	Deleted.
15	L	1	1	-SCADA terminal, block valve, and 100-foot-long, 220 volt power distribution line...	-Scraper trap, SCADA terminal, block valve, and 100-foot-long, 220 volt power distribution line...
17	L	3	3	N/A	Add: (after U.S. Highway 191) "The scraper trap at MP 90 would be located near the phosphate slurry booster station in the NW 1/4 of Section 15, T. 12 N., R. 105 W."
			7	"...power line to the scraper trap."	"...power line to the Rock Springs scraper launcher."
23	R	2	4	...local authorities who control the water resources.	...state and local authorities who control and permit water-related activities.

Page	Col.	Para.	Line	IS	SHOULD BE
23	R	2	9	N/A	Add: (The source of the test water and the method of disposal will be described in the Construction and Operation Plan.)
26	L	4	1	The Rock Springs scraper trap would operate completely unattended.	The Rock Springs and Richards Gap scraper traps would operate completely unattended.
27	L	5	5	Denver and Tio Grande Western Railroad	Denver and Rio Grande Western Railroad
	R	2	6	-1,587.6 acres of land managed by BLM	1,590.6 acres of land managed by BLM (includes 3 acres for the proposed compressor station)
		4	1-5	The Cortez to Rangely CO_2 Pipeline EIS, being prepared by the BLM Grand Junction District, analyzes a CO_2 pipeline from Cortez to Rangely proposed by Shell Pipeline Corporation.	Deleted.
29	R	4	3-5	"...dirt roads, its additional length would have caused more environmental disturbance."	"...dirt roads, its additional length would be more expensive to build and would have caused more environmental disturbance."
35	L	4	3-5	...No impacts to paleontological resources are anticipated from implementation of the Sand Wash Alternative.	Deleted.
40	R	1	9	56 miles, mule deer winter range	64 miles, mule deer winter range Add: MP 168-176

Page	Col.	Para.	Line	IS	SHOULD BE
40	R	1	14	- 33 miles of raptor habitat MP 47-50 MP 143-144 MP 153-167	- 52 miles of raptor habitat MP 47-50 MP 51-52 MP 54-56 MP 57-58 MP 60-61 MP 63-66 MP 68-72 MP 74-76 MP 85-89 MP 153-167
42	R	5	14	"would significantly lower the pH..."	"would maintain the original pH..."
44	R	4	last	N/A	Add: Four federally designated candidate plant species could occur along the various routes. (See Appendix 6 of the draft EIS for identification of these species.) Although these species have no legal protection under the Endangered Species Act, they are referenced for planning purposes and should be considered and protected if at all possible.
48	L	P	1-2	Chevron phosphate slurry pipeline and the realignment of the county road	Chevron phosphate slurry pipeline along the west edge of the county road.
52	L	1	11	N/A	Add: However, with proper construction operations (timing and compliance with regulations) these impacts are not expected to occur.

Page	Col.	Para.	Line	IS	SHOULD BE
53	L	2	6-16	However, some secondary, short-term impacts caused by pipeline construction could occur during the grazing season: - Livestock access to watering facilities could be disrupted for longer than 1 day; - grazing patterns could be disrupted from the trench being left open for longer than 14 days; and - livestock grazing control of problems could occur from gates or temporary gap fences being left unsecured.	Deleted.
55	R	4	1	A total of 120 acres would be significantly affected..	A total of 113 acres would be significantly affected...
63	R	3	1	The Wyoming Department of Transportation (WDOT)..	The Wyoming State Highway Department...
			10-11	Colorado Department of Transportation (CDOT)	Colorado Department of Highways (CDOH)
66	R	4	3-5	-Pipeline construction destroyed paleontological resources that would have contributed to knowledge of prehistoric species.	-pipeline construction disturbed or destroyed paleontological resources that would have contributed to the scientific knowledge of prehistoric species.
		5	1-2	The Proposed Action would cross at least one area that could contain paleontological resources.	The Proposed Action would cross numerous areas containing potentially significant paleontological resources.
			4-5	...The academic community considered this an important find.	...The scientific community considered this an important find.

Page	Col.	Para.	Line	IS	SHOULD BE
67	L	1	1-3	Construction of the Proposed Action could uncover additional paleontological resources in the vicinity of the Red Creek Escarpment.	Construction of the Proposed Action could uncover additional paleontological resources similar to those in the vicinity of the Red Creek Escarpment.
			3-4	...However, important paleontological resources should not be destroyed..	...However, important paleontological resources should not be disturbed or destroyed...
			7	...require that a paleontologist conduct surveys..	...require that a qualified professional paleontologist conduct surveys...
			9-10	...important resources could be discovered and knowledge could be increased.	...important resources could be discovered and salvaged, thus increasing scientific knowledge.
		2	2-4	...could increase the potential for additional paleontological resources to be discovered.	...could increase the potential for additional paleontological resources to be discovered, salvaged, and studied.
71	R	1	4	approximately 44 miles, raptor habitat MP 199	approximately 45 miles, raptor habitat MP 198
76	R	6	3	...3,122,000 acre-feet (4,309 cfs)	...4,563,000 acre-feet (6,303 cfs)
84	L	4	1	The WDOT reports...	The Wyoming State Highway Department reports...
			7	CDOT	CDOH

Page	Col.	Para.	Line	IS	SHOULD BE
84	R	4	last	N/A	Add new section:

Paleontological Resources

Affected Environment

Portions of the Sand Wash Alternative route would cross formations that typically yield significant fossils (those that add to the definition of a species or that fill in missing data on more commonly found species). Previous, scattered studies in the area have uncovered several fossils of importance to the scientific community.

Direct Impacts

Construction of the Sand Wash Alternative could uncover some significant fossils. However, important paleontological resources are not expected to be disturbed or destroyed, nor knowledge of prehistoric species lost, because the measures in Appendix 1 require a qualified, professional paleontologist to conduct surveys before any areas are disturbed and to be present during pipeline construction. In addition, important resources could be discovered and salvaged, thus increasing scientific knowledge.

Summary of Impacts

Since several important fossils were discovered during previous studies, the potential exists for more to be discovered during construction of the Sand Wash Alternative.

Page	Col.	Para.	Line	IS	SHOULD BE
85	R	4	All	If the No-Action Alternative was selected, Chevron would probably renegotiate a contract with Shell Pipeline Corporation (Shell) to supply CO_2 from Cortez. This could cause delays in the construction of the pipeline or increases in the prices of CO_2. Ultimately, the CO_2 injection program could be implemented. The impacts, then, of the No-Action Alternative would likely be those from building the CO_2 pipeline from Cortez to Rangely, Colorado. Impacts associated with the Proposed Action would not occur except for the socio-economic impacts resulting from the Rangely Weber Sand Unit continuing in operation. The following summary has been excerpted from the McElmo to Rangely CO_2 Pipeline draft EIS, currently in preparation.	If the No-Action Alternative was selected, Chevron would probably negotiate a conract to have CO_2 supplied from either Utah or Cortez, Colorado. This could cause delays in the construction of the pipeline or increases in the prices of CO_2. Ultimately, the CO_2 injection program could be implemented. The impacts, then, of the No-Action Alternative would be those associated with building a pipeline from Utah or Cortez, Colorado to obtain other sources of CO_2. Additional National Environmental Policy Act compliance would be required at the time an application is filed for a right-of-way from either of these other sources. Impacts associated with the Proposed Action would not occur except for the socioeconomic impacts resulting from the Rangely Weber Sand Unit continuing in operation.
85-86			1-9	No-Action Alternative Summary (entire section)	Deleted.
86	L	4	4	"...extend oil production from the Rangely Unit oil field by an average of 4 million barrels per year for a 24-year period."	"...extend oil production from the Rangely Weber Sand Unit oil field by an average of 4 million barrels per year for a 12- to 16-year period."

Page	Col.	Para.	Line	IS	SHOULD BE
91	R	6	All	Neither the Proposed Action nor the Sand Wash Alternative would significantly affect either game fish or the endangered Colorado squawfish and humpback chub.	Neither the Proposed Action nor the Sand Wash Alternative would significantly affect game fish. The endangered Colorado squawfish and humpback chub may be affected by the project or by a pipeline rupture after the project is completed.
		7	1-2	The Sand Wasn Alternative would temporarily disturb 537 more acres of soils than the Proposed Action..	The Sand Wash Alternative would temporarily disturb 543 more acres of soils than the Proposed Action...
95	R	6	All	The Proposed Action would cross one area known to have paleontological resources that are valuable to science. The Sand Wash Alternative would not cross any areas known to contain these resources.	The Proposed Action would cross at least one area known to contain fossils valuable to the scientific community. Both the Proposed Action and the Sand Wash Alternative would cross other formations that typically yield significant paleontological resources.
143	L	9	last	N/A	Add: Olendorff, Richard R., A. Miller, and R. Lehman. 1981. Suggested Practices for Raptor Protection on Powerlines. Raptor Research Report 4. Raptor Research Foundation, Inc. University of Minnesota: St. Paul.
147	L	7	1	CDOT--Colorado Department of Transportation	CDOH--Colorado Department of Highways
	R	24	1	WDOT--Wyoming Department of Transportation	Deleted.
151	L	6	last	N/A	Add: ORIFICE METER--A measuring instrument that records the flow rate of gas, enabling the volume of gas delivered or produced to be computed.

TABLE CHANGES

TABLE 1-1

Agency	Nature of Action
Is:	
Department of the Interior National Park Service	Issue antiquities...permit...
Department of Agriculture Forest Service	Issue temporary special use permit...
Should be:	
Department of the Interior Bureau of Land Management	Issue antiquities...permit...
Department of Agriculture Forest Service	Issue special use permits...

TABLE 2-1

Is:

County	Baseline
Population	
Sweetwater County	44,739
Green River	13,672
Rock Springs	20,812

Should be:

County	Baseline (1982)
Population	
Sweetwater County	44,739[2]
Green River	13,672[2]
Rock Springs	20,812[2]

[2]Data for 1983.

TABLE 2-3

Is:

Characteristic	Baseline

Should be:

Characteristic	Baseline (1982)

TABLE 2-4

Is:

Location	Baseline
Rio Blanco County	8,480

Should be:

Location	Baseline
Rio Blanco County	8,480[1]

[1]Data for 1981.

TABLE 2-5

Habitat	Miles	Acres
Is:		
Mule Deer winter, year-round, fawning	20	240
winter, year-round	56	672
Raptor close proximity to known nests	33	N/A
Should be:		
Mule Deer winter, year-round, fawning	20	240
winter, year-round	64	786
Raptor near known nests	52	N/A

TABLE 2-9

Component	Existing VRM Class	Number of Acres Affected	Acres of VRM Class Affected
Is:			
SCADA Terminals			
MP 38	II	3.0	7
MP 52.5	III	0.5	1
Should be:			
SCADA Terminals			
MP 38	II	3.0	0
MP 52.5	--Deleted--		

TABLE 2-10

Component	Existing VRM Class	Acres Significantly Affected	Primary Viewpoints	Impacts
Is:				
SCADA Terminals				
MP 38	II	7[4]	Green River	Structural contrasts from the addition of terminals and distribution lines
MP 52.5	III	1	US Highway 191	Structural contrasts from the addition of terminals and distribution lines
MP 143	II/III	1	Access road to Dinosaur National and the Green River	Contrasts from the addition of terminals and distribution lines
Microwave Stations				Additional cumu-
Grizzly Ridge	R (II)	0	Utah State Highway 44,	Additional cumulative structural recreation sites, and possibly contrasts of existing antennas and from summer homes building
Should be:				
SCADA Terminals				
MP 38	II	7[4]	Green River	Structural contrast from the addition of terminal
MP 52.5		--Deleted--		
MP 143	II/III	1	Access road to Dinosaur National Monument and the Green River	Contrasts from the addition of terminals and distribution lines

TABLE 2-10 (continued)

Component	Existing VRM Class	Acres Significantly Affected	Primary Viewpoints	Impacts
Should be:				
Microwave Stations				
Grizzly Ridge	R (II)	0	Utah State Highway 44	Additional cumulative structural contrast of existing antennas and building as seen from recreation sites and possibly from summer homes.

TABLE 2-16

Habitat	Miles	Acres
Is:		
Raptor close proximity to known nests	44	N/A
Should be:		
Raptor near known nests	45	N/A

TABLE 2-20

Is:

[4]Acreages are shown for power distribution lines at 2.2 miles/acre for approximately a 2-foot width.

Should be:

[4]Acreages are shown for power distribution lines at 2.2 acres/mile for approximately a 20-foot width.

TABLE 2-21

Components	Acres Significantly Affected	Impacts
Is:		
SCADA Terminals		
MP 38	7	Structural contrasts from the addition of terminals and distribution lines
MP 111	2	Structural contrasts from the addition of terminals and distribution lines
MP 160	9 2	Structural contrasts from the addition of terminals and distribution lines
Should be:		
SCADA Terminals		
MP 38	0	Structural contrasts from the addition of terminal
MP 111	2	Structural contrasts from the addition of terminal and distribution lines
MP 160	9 2	Structural contrasts from the addition of terminal and distribution lines

TABLE ADDITIONS

TABLE 1-1

Agency	Nature of Action	Authority	Project Feature
Colorado			
Department of Highways	Issue utility crossing permits		Pipeline crossing highways

TABLE 2-9

Component and Location	Existing VRM Class	Number of Miles Affected	Acres of VRM Class Affected
Meter Station			
MP 48.9	III	--	1

TABLE 2-10

Component and Location	Existing VRM Class	Acres Significantly Affected	Impacts
Meter Station			
MP 48.9	III	1	Structural contrasts from adding the meter building, antenna, and fencing

Chapter 3

Consultation and Coordination

The Bureau of Land Management (BLM) requested and received consultation from many organizations and individuals, public and private, in developing the draft and final environmental impact statements (EISs) on the proposed Rangely Carbon Dioxide Pipeline project.

SCOPING PROCESS

Regulations for implementing the National Environmental Policy Act (40 CFR, Part 1501.7) require an early and open scoping process. During this process, the scope of issues to be analyzed and significant issues related to the Proposed Action were identified. Information obtained during the scoping process was one of the sources used to determine significant issues to be addressed in detail in the EIS.

The scoping process was also used to inform affected federal, state, and local agencies and other interested persons about the proposal and to identify existing environmental reports and information related to the proposal.

The basic goal of scoping is to make EISs more concise and meaningful to those in the Federal Government who must make decisions on the proposal, those in state and local government, and those who may be affected by approval or disapproval of the proposal or its alternative.

Method of Scoping

The scoping process for the Rangely Carbon Dioxide Pipeline project consisted of agency meetings, mailouts to solicit written comments from the public, and informative conversations with interested parties within the affected area. With the assistance of federal and state agencies, local entities, and private individuals, the significant issues and concerns were identified for analysis in the EIS. Insignificant issues were also identified so that they could be eliminated from the scope of the EIS. Project information and information on the scoping process were published in the Federal Register on January 6, 1984.

The questionnaire scoping packets were mailed to interested persons selected in part from the mailing lists of the Chevron phosphate and Riley Ridge natural gas projects. Packets were also sent to anyone requesting them.

Results of Scoping

The results of the scoping process, along with further input from various federal and state agencies, identified the most significant issues associated with the project. The extent to which each resource was analyzed was partially determined by the concerns raised during scoping. The concerns were consolidated, grouped by resource topic, and put in tabular form. Within each resource topic, the issues were listed in order of importance as determined by the number of persons indicating an issue as a high priority. Finally, votes given that resource topic were totaled.

From these results it was determined that the most significant issues were within the following topics (listed in order of overall significance):

- Socioeconomics
- Wildlife
- Soils and Vegetation
- Water Resources

A detailed report on the EIS scoping process, Rangely Carbon Dioxide Pipeline: Public Scoping Results Document (BLM 1984a) can be obtained from the Bureau of Land Management, Division of EIS Services, First Floor East, 555 Zang Street, Denver, Colorado 80228. The report includes a discussion of the procedures used to analyze the scoping data, lists the issues raised during scoping, and identifies the participants.

DRAFT EIS CONSULTATION AND COORDINATION

The Bureau of Land Management (BLM) was assigned lead responsibility for preparing the environmental impact statement for the proposed carbon dioxide pipeline. The BLM sought help from the following cooperating agencies:

U.S. Department of the Interior
Bureau of Reclamation
Fish and Wildlife Service
National Park Service

U.S. Department of the Army
Corps of Engineers

BLM personnel with a wide variety of disciplines were assigned to a team to ensure an interdisciplinary approach for preparing the EIS. Their areas of expertise included socioeconomics, wildlife biology, soils and vegetation, cultural resources, agriculture, air and water resources, visual resources, transportation and wilderness resources. Information about EIS team members is included in the List of Preparers of the draft EIS.

Between December 1983 and August 1984, various unpublished drafts and portions of drafts were distributed for review to federal agencies. The EIS was revised based on written review comments and published as the official draft EIS. The draft EIS was released for a 60-day public review on August 31, 1984.

Table 2 lists the federal and state agencies, local governments, legislatures, and individuals that were sent copies of the draft EIS and requested to complete a formal review of the document.

PUBLIC REVIEW OF THE DRAFT EIS

The draft environmental impact statement (INT DEIS 84-47) was filed with the Environmental Protection Agency on August 31, 1984 and announced in the Federal Register on August 30, 1984 (Vol. 49, No.170, page 34419). In addition, media releases were sent to radio stations and newspapers in the states that would be affected by the proposed action or its alternatives. The releases announced the availability of the draft EIS, described the proposed action, identified key impacts, and requested public comment on the adequacy and accuracy of the statement.

Copies of the final EIS may be obtained from:

Bureau of Land Management
Division of EIS Services
555 Zang Street
1st Floor East
Denver, CO 80228

A limited number of copies may also be obtained from the following BLM offices:

TABLE 2

AGENCIES, ORGANIZATIONS, AND INDIVIDUALS REQUESTED TO FORMALLY REVIEW THE DRAFT EIS

Federal Government Agencies

* Advisory Council on Historic Preservation

Department of Agriculture
* Forest Service
* Soil Conservation Service

Department of the Army
* Corps of Engineers[1]

Department of Energy

* Department of Housing and Urban Development

Department of the Interior
Bureau of Indian Affairs
* Bureau of Mines
* Bureau of Reclamation[1]
* Fish and Wildlife Service[1]
* National Park Service[1]
* Geological Survey

* Environmental Protection Agency

Federal Energy Regulatory Commission

* Department of Transportation
Federal Highway Administration

Interstate Commerce Commission

State Government Agencies

* Colorado State Clearinghouse

Utah State Clearinghouse

* Wyoming State Clearinghouse

TABLE 2 (continued)

AGENCIES, ORGANIZATIONS, AND INDIVIDUALS REQUESTED
TO FORMALLY REVIEW THE DRAFT EIS

Local Government Agencies

- Colorado
  - Moffat County
  - Rio Blanco County
  - Mayor of Dinosaur
  - Town of Rangely
- Utah
  - Daggett County
  - Uintah County
- Wyoming
  - Lincoln County
  - Sweetwater County
  - Lincoln-Uinta Association of Governments
  - Town of Granger

Environmental Groups

- Colorado Native Plant Society
- Colorado Natural Heritage Inventory
- Green River Economic Development Association
- Sierra Club
- Wyoming Outdoor Council
- Wyoming Wildlife Federation

Industries and Individuals[2]

State Legislators

- Colorado
- Utah
- Wyoming

U.S. Senators and Representatives

- Colorado
- Utah
- Wyoming

* Reviewed the draft EIS and provided comments to BLM

[1] Cooperating Agencies

[2] Detailed list can be provided upon request from Janis VanWyhe, Project Leader, 555 Zang Street, First Floor East, Denver, Colorado 80228

No formal public hearings to solicit public comments on the adequacy of the draft EIS were held. Only one request to have a hearing was received.

Colorado

Colorado State Office
1037 20th Street
Denver, CO 80202

Craig District Office
P.O. Box 248
Craig, CO 81625

White River Resource Area
P.O. Box 928
Meeker, CO 81641

Utah

Utah State Office
324 South State, Suite 301,
Salt Lake City, UT 84111

Vernal District Office
170 South 500 East
Vernal, UT 84078

Wyoming

Wyoming State Office
2515 Warren Avenue
P.O. Box 1828
Cheyenne, WY 82003

Rock Springs District Office
P.O. Box 1869
Rock Springs, WY 82901-1869

Big Sandy/Salt Wells
Resource Area
P.O. Box 1170
79 Winston Drive
Rock Springs, WY 82902-1170

Kemmerer Resource Area
P.O. Box 632
Kemmerer, WY 83101

Approximately 1,000 copies of the draft EIS were distributed by mail to various individuals, organizations, and government agencies.

COMMENTS AND RESPONSES

The BLM received 27 letters addressing the draft EIS during the public comment period (August 31, 1984 through October 30, 1984). All letters were assigned a reference number and reviewed. Individual substantive comments (those that presented new data or questions of new issues bearing directly on the effects of the proposed action and its alternative) were identified and responded to. Table 3 lists the reference numbers and identifies the commenters.

All comment letters have been reprinted verbatim except for their respective attachments, and all changes have been addressed in this final environmental impact statement. The responses which immediately follow each letter are identified by the reference numbers which appear on the comment letter.

The comment responses either explain the Errata Summary changes to the draft EIS or explain why changes were not appropriate.

TABLE 3

COMMENT LETTERS

Reference Number	Source	Location
1	Department of Transportation	Denver, Colorado
2	Wyoming Recreation Commission	Cheyenne, Wyoming
3	Advisory Council on Historic Preservation)	Washington, D.C.
4	Department of the Interior National Park Service, Rocky Mountain Regional Office	Denver, Colorado
5	Department of the Army	Sacramento, California
6	Department of Housing and Urban Development	Denver, Colorado
7	Department of Agriculture, Forest Service, Ashley National Forest	Vernal, Utah
8	Department of the Interior, Bureau of Reclamation	Salt Lake City, Utah
9	Gail & Edgar B. Robinson, Jr.	Marlboro, Massachusetts
10	Department of the Interior, Bureau of Mines	Denver, Colorado
11	Environmental Protection Agency	Denver, Colorado
12	Lenora and Clifford Smith	Browns Park, Utah
13	Department of Agriculture, Soils Conservation Service	Portland, Oregon
14	Department of the Interior Geological Survey	Reston, Virginia
15	Exxon Company, U.S.A.	Midland, Texas
16	Ortho, Chevron Chemical Company	Rock Springs, Wyoming
17	Mountain Fuel Resources, Inc.	Salt Lake City, Utah

TABLE 3 (continued)

COMMENT LETTERS

Reference Number	Source	Location
18	Colorado Department of Natural Resources - Oil and Gas Conservation Commission - State Soil Conservation Board - Department of Highways - Division of Wildlife	Denver, Colorado
19	State of Wyoming Office of the Governor - Office of Industrial Siting Administration - Oil and Gas Conservation Commission - State Highway Department - State Engineer's Office - Recreation Commission - Game and Fish Department - The Geological Survey of Wyoming	Cheyenne, Wyoming
20	John R. Swanson	Berkeley, California
21	Department of Agriculture Forest Service	Lakewood, Colorado
22	Department of the Army Corps of Engineers	Omaha, Nebraska
23	Colorado Interstate Gas Company	Colorado Springs, Colorado
24	Department of the Interior Bureau of Reclamation	Salt Lake City, Utah
25	Marathon Oil Company	Casper, Wyoming
26	Department of the Interior National Park Service	Denver, Colorado Dinosaur, Colorado
27	Department of the Interior Fish and Wildlife Service	Salt Lake City, Utah

U.S. Department
of Transportation

**Federal Highway
Administration**

Region Eight

September 13, 1984

Ms. Janis L. Van Wyhe, Project Leader
U.S. Department of Interior
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms. Van Wyhe:

Thank you for the opportunity to review the Rangely Carbon Dioxide Pipeline Draft Environmental Impact Statement, dated August 1984.

1.1 The DEIS states that both "build" alternatives will parallel highways for over 90 percent of their lengths. The DEIS does not describe how close the pipeline would be to the highway. Since this is a high pressure pipeline (2,200-2,700 PSI), we recommend that copies of this DEIS as well as future environmental documents be sent to the Colorado Department of Highways, the Wyoming Highway Department and the Utah Department of Transportation for their review and comment.

It would be well to work with these agencies as the planning and project development progresses so as to keep your operations efficient as well as minimize any harm or delay to the traveling public.

F. S. Allison

Frank S. Allison
Director, Office of Planning
and Program Development

1.1 The pipeline would be built just outside the highway right-of-way close enough so that a new corridor would not be needed but far enough away so that the pipeline would not interfere with the road and other existing utilities.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

WYOMING RECREATION COMMISSION

122 WEST 25TH
CHEYENNE, WYOMING 82002

ALVIN F. BASTRON, P.E.
Director
777-7695

September 20, 1984

Janis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms. VanWyhe:

The Rangely Carbon Dioxide Pipeline Draft EIS was received in this office. Thank you for giving us the opportunity to comment.

Enclosed is a memorandum from our staff archeologist who reviewed the materials. He indicates that adequate provision has been made for cultural manifestations. Therefore, the Wyoming State Historic Preservation Officer (SHPO) recommends to the Bureau of Land Management that they grant cultural clearance for the project in accordance with state and federal laws.

If you have any questions concerning this recommendation please contact the appropriate member of our staff.

Sincerely,

Mark Junge
Deputy SHPO

FOR:
Alvin F. Bastron, Director and
State Historic Preservation Officer

MGJ:klm
Encls.

WYOMING RECREATION COMMISSION

STATE HISTORIC PRESERVATION OFFICE

REVIEW AND COMPLIANCE

Interdisciplinary Staff Comments

Archeology • History • Historical Architecture • Recreation Planning

TO: Mark Junge, Chief

FROM: Richard Bryant, Compliance Archeologist RB

DATE: September 20, 1984

RE: §Rangely Carbon Dioxide Pipeline Lincoln and Sweetwater Counties, Draft EIS

The stipulations for identification, evaluation and protection of cultural resource sites listed on page 105 of the DEIS satisfy our concerns with this project. Specific comments on the effects to particular sites will be developed following our review of the survey reports.

Thank you for your assessment and recommendation. Your comments will be considered in the decision-making process. Also please see Appendix 1 of this EIS (Appendix 3 of the draft) to be assured that state and federal laws have been and will be considered.

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, Room 450
Golden, Colorado 80401

September 25, 1984

Ms. Janis L. Van Wyhe
Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First floor east
Denver, CO. 80228

REF: Rangely Carbon Dioxide Pipeline, Draft Environmental Impact Statement (DEIS), August 1984.

Dear Ms. Van Wyhe:

Thank you for your request of September 10, 1984, for our review of the above-referenced DEIS, pursuant to the National Environmental Policy Act of 1969.

The DEIS mentions that historic and cultural properties included in and eligible for the National Register of Historic Places and meeting the National Register Criteria (36 CFR Sec. 60.4) will be affected by the project. Please be advised that requirements of NEPA may be coordinated with requirements of Section 106 of the National Historic Preservation Act of 1966 as implemented by the Council's regulations. For more information about accomplishing an efficacious coordination of NEPA and the National Historic Preservation Act, please refer to Section 800.9 of the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800).

We are working with BLM personnel in the Kemmerer Resource Area, Wyoming, with the Forest Service, and with the Wyoming State Historic Preservation Officer (SHPO) on the development of a Memorandum of Agreement (MOA) for the La Barge Project (Shute Creek Plant and related facilities), of which the Rangely CO2 Pipeline is a related element. This La Barge Project MOA will set forth a plan or procedure to be used in the identification, evaluation, and treatment of historic and cultural properties, in compliance with Section 106. In initial discussions at the beginning of the La Barge Project MOA development, it was decided by BLM staff of the Kemmerer Resource Area, the Council, and other consulting parties that compliance with Section 106 and the Council's regulations was best accomplished by considering this Rangely CO2 pipeline as a project separate from the rest of the La Barge (Shute Creek Plant, et al.) Project. This decision was made primarily because the pipeline would be constructed with separate right-of-way grants, would encompass parts of the states

of Wyoming, Utah, and Colorado rather than just Wyoming, and would involve additional Federal agencies, including the Bureau of Reclamation, Fish and Wildlife Service, National Park Service, and Army Corps of Engineers, than the La Barge (Shute Creek Plant et al.)

3.1 We strongly recommend that BLM, as the lead agency for this project, request the Council's comments and the development of a MOA that, similar to that created for the La Barge Project, would set forth a plan or procedure for the identification, evaluation, and treatment of historic and cultural properties, pursuant to Section 106 and the Council's regulations. The Council can consider the DEIS as satisfying much of the documentation

3.2 required by Section 800.13(b). In addition, we will need additional information regarding the historic and cultural properties expected to be affected by the project, the MAPCO and Trailblazer Pipeline projects and the degree to which historic and cultural properties affected by these projects will be in common with the Rangely CO2 Pipeline, plus the status of consultations with the Colorado, Utah, and Wyoming SHPOs.

If you have any questions or wish to discuss this further, please contact Ms. Marjorie Ingle of my staff at 236-2682

Sincerely,

Robert Fink
Chief, Western Division
of Project Review

3.1 Thank you for the recommendation. BLM is planning to develop a memorandum of agreement similar to that used for the La Barge project.

3.2 The MAPCO and Trailblazer Projects are completed and will not be affecting any historic and cultural properties. As BLM proceeds with the Official 106 Compliance Procedures, we will keep you informed. Also, please see comment letter 2 from the Wyoming Recreation Commission. No comments on cultural resources were received from Colorado or Utah.

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:

L7619 (RMR-PC)

OCT 2 1984

Memorandum

To: Project Leader, Division of EIS Services, Bureau of Land Management, Denver, Colorado

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Review of Draft Environmental Impact Statement (DEIS), Rangely Carbon Dioxide Pipeline-August 1984

We have reviewed the subject document and feel that the concerns we expressed in our memorandum of June 11 have been adequately addressed in this DEIS.

for Richard A. Strait

OCT -3 84 AM 8:00

Thank you for your assessment; it will be considered in the decision-making process.

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

Salt Lake City Regulatory Office

October 4, 1984

Miss Janis L. VanWyhe
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Miss VanWyhe:

This concerns the Draft Environmental Impact Statement on the proposed Rangely Carbon Dioxide Pipeline.

We have reviewed the document and conclude that it adequately addresses our concerns. As noted on page 10, a Department of the Army permit pursuant to Section 404 of the Clean Water Act would be required prior to discharging dredged or fill material into a water of the United States or its adjacent wetland. We have recently corresponded with Chevron Corporation regarding permit requirements associated with constructing pipeline crossings of the Green River in Utah. I have enclosed a copy of our letter dated August 28, 1984 regarding the same.

We have been informed by the Fish and Wildlife Service that the Bureau of Land Management is consulting with them regarding potential impacts of pipeline construction on the Colorado squawfish. In the event that the Fish and Wildlife service renders a "non-jeopardy" opinion, condition "3" of the Nationwide permit, as referenced in our August 28, 1984 letter, will be satisfied.

If you have any questions, please contact Mr. Tom Skordal of our Salt Lake City Regulatory Office, telephone (FTS) 588-6015.

Sincerely,

Art Champ
Chief, Regulatory Section

Enclosure

COPY

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

August 28, 1984

Salt Lake City Regulatory Office (NW1282076)

Mr. Murray D. Peck
Chevron Corporation
Engineering Department
P.O. Box 7141
San Francisco, California 94120-7141

Dear Mr. Peck:

This is in response to your letter dated August 17, 1984 concerning two proposed pipeline crossings of the Green River, Uintah County, Utah.

A nationwide permit has been issued which authorizes discharges of dredged or fill material placed as backfill or bedding for utility line crossings where there is no change in bottom contours (excess material must be removed to an upland site). Your proposed crossings can be constructed under this authority provided the work conforms to the conditions listed on the attached information sheet.

Condition "3" states:

"3. That the activity will not jeopardize a threatened or endangered species as identified under the Endangered Species Act, or destroy or adversely modify the critical habitat of such species. In the case of Federal agencies, it is the agency's responsibility to review its activities to determine if the action "may affect" any listed species of critical habitat. If so, the Federal Agency must consult with the Fish and Wildlife Service and/or National Marine Fisheries Service."

The endangered Colorado River Squawfish is known to inhabit the Green River in the vicinity of the proposed crossing near Jensen, Utah and Dinosaur National Monument. Adult squawfish migrate through the project area on their way to spawning areas upstream. In late summer and fall, juveniles of the species drift downstream through the project area and utilize backwater areas. In order to avoid any impact to the Colorado River Squawfish and thus comply with this condition, you must refrain from performing work in the Green River at this site from 1 May through 1 November.

COPY

If you have any questions, please contact me in our Salt Lake City Regulatory Office, telephone (801) 524-6015.

Sincerely,

Tom Skordal
Chief, Salt Lake City
Regulatory Office

Enclosure

Copies Furnished:

U.S. Fish and Wildlife Service 84138
U.S. Environmental Protection Agency (8WM-SP) 80295
Utah Bureau of Water Pollution Control 84110

Thank you for your assessment; it will be considered in the decision-making process.

U.S. Department of Housing and Urban Development
Denver Regional Office, Region VIII
Executive Tower
1405 Curtis Street
Denver, Colorado 80202-2349

October 12, 1984

Ms. Janis L. Van Wyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms. Van Wyhe:

Thank you for the opportunity to review and comment on the Rangely Carbon Dioxide Pipeline Draft Environmental Impact Statement (EIS).

Your draft has been reviewed with specific consideration for the areas of responsibility assigned to the U. S. Department of Housing and Urban Development. This review considered the proposals compatibility with local and regional comprehensive planning and impacts on urbanized areas.

6.1 One of the impacts you note is . . . "a significant population increase in Rock Springs, Wyoming." The EIS does not address the impact on Rock Springs regarding the city's ability to provide adequate housing, water and sewer, health care, police and fire protection and social and recreational services to support the proposed population increase. Mitigation of these concerns should be addressed in the Final EIS. With this exception, this EIS is adequate for our purposes.

If you have any questions regarding these comments, please contact Mr. Howard S. Kutzer of my staff, at 844-3102.

Sincerely,

R. J. Matuschek

Robert J. Matuschek
Director
Office of Community
Planning and Development

6.1 Page 36 of the draft EIS states that most of the impacts to Rock Springs infrastructure would be mitigated by the ISA permit conditions applied to the Chevron Phosphate Project. The remaining impacts would not be significant and could be handled by the existing infrastructure.

United States Department of Agriculture
Forest Service
ASHLEY NATIONAL FOREST
Ashton Energy Center, Suite 1150
1680 W. Highway 40
Vernal, Utah 84078

Reply to: 1950

Date: October 11, 1984

Janis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, CO 80228

Dear Ms. VanWyhe:

Following are comments from the Ashley National Forest on the RANGELY CARBON DIOXIDE PIPELINE DEIS:

7.1 Chapter One, page 10, Table 1-1

The authorizing action for the Forest Service should state that a special use permit would be issued. Table 1-1 shows that a temporary sup would be issued.

7.2 I also question if Section 28 of the Mineral Leasing Act, 1920 applies under this proposed action, since no pipeline construction is proposed on National Forest Land.

7.3 Chapter One, page 15, Land Status/Ownership

The 0.25 acres of Forest Service land on Grizzly Ridge should be shown.

7.4 Chapter Two, page 56, Table 2-10

The impact writeup for Grizzly Ridge is unclear; possibly should read ... Additional cumulative structural contrast of antennas as seen from recreation sites.

7.5 Chapter Two, page 64, Direct Impacts on Transportation Networks

Writeup should mention increase in volume of traffic on Forest roads to Grizzly Ridge microwave site.

7.6 Appendix 3, page 108, Specific Federal Measures

There are no specific measures for National Forest land. This appendix should at least, reference the Chevron Phosphate Project DEIS, Appendix 2 for applicable Forest Service Measures.

FS-6200-11(8-80)

We appreciate the opportunity to respond and trust you will find these comments helpful. Any questions you may have can be directed to Terry Hopson of this office.

Sincerely,

DUANE G. TUCKER
Forest Supervisor

7.1 The corrections have been made. See Errata Summary for changes to page 10 of the draft EIS.

7.2 The basis for listing Section 28 of the Mineral Leasing Act of 1920 is a memorandum/opinion from the Office of the Solicitor dated July 20, 1984. The memorandum concludes that rights-of-way and use permits for CO_2 pipelines from either the wellhead or the processing plant must be issued pursuant to Section 28 of the Minerals Leasing Act of 1920 rather than the Federal Land Policy and Management Act of 1976.

7.3 Chevron Chemical Company plans to use a microwave for the CO_2 pipeline on Grizzly Ridge which will be permitted for the phosphate project. Since that action has already been analyzed in the Chevron Phosphate Project EIS, it was not included in this EIS. For the same reason, no additional acres were added for disturbance.

7.4 Your observation is correct. The phrase has been rewritten to include your suggested change. See the Errata Summary for change to page 56 of the draft EIS.

7.5 The increase in traffic would be minimal and, therefore, not cause any significant impacts.

7.6 See response to comment 7.3.

United States Department of the Interior

BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11568
SALT LAKE CITY, UTAH 84147

IN REPLY
REFER TO: UC-150

520.

OCT 16 1984

Memorandum

To: Ms. Janis L. VanWyhe, Project Leader, Bureau of Land Management, Division of EIS Services, 555 Zang Street, First Floor East, Denver, Colorado 80228

From: Regional Director
Bureau of Reclamation

Subject: Review of Draft Environmental Impact Statement - Rangely Carbon Dioxide Pipeline (ER 84/47)

We have reviewed the above draft EIS and have the following comments to offer:

8.1 1. The draft EIS does not have an index as required by NEPA 1502.10(j). An index would have been beneficial in the review process.

8.2 2. The reach of pipeline between mileposts 140 and 145 cross the northern end of lands included in the Jensen Unit of the Central Utah Project. However, proposed features of that unit; i.e., Burns Pumping Plant and Delivery System, will be located outside of the pipeline corridor.

8.3 3. The pipeline (proposed action) will traverse 12.2 miles of Reclamation withdrawn lands according to Appendix 4, Table A4-1, pages 119-121. A review of the locations of these lands indicates that much of the withdrawn land has been revoked. Other areas appear to be old borrow sites (sand and gravel) that may have been used for the Fontenelle Project of the Flaming Gorge Unit.

In conclusion, this office finds no adverse action to any Reclamation facility, existing or proposed, that might result from the construction of the carbon dioxide pipeline.

8.1 CEQ Regulation 1502.10, for implementing the procedural provisions of the National Environmental Policy Act (NEPA), recommends rather than requires an index. Altnough an index can be beneficial in the review process, BLM feels that the Table of Contents is detailed enough to perform the same function in this document. A hand-prepared index is, of necessity, limited in scope.

8.2 Thank you for the information; it will be considered in the decision-making process.

8.3 The BLM land status maps are presently being updated. When the actual right-of-way grant is issued, any stipulation relating to actual withdrawn land will be included.

30 Naugler Av
Marlboro, MA 01752
October 16, 1984

Janice L. Van Wyke, Project Leader
Division of Ecl S Services
Denver, CO

Dear Ms. Van Wyke:

This letter contains our comments on the draft Ecl S on the proposed Rangely Carbon Dioxide Pipeline project. We have two comments:

9.1 1. We strongly hope that sport hunting and steel-jaw trapping will be prohibited in all the geographic areas under discussion. We feel very deeply about this.

2. Never before in any Ecl S have we seen such sensitive attention to consideration of wildlife as we see in your Rangely Ecl S. We are able, therefore, to advocate your "Proposed Action."

Sincerely,

Gail B. and Edgar B. Robinson, Jr.

9.1 BLM has no legal authority to require or even request such a prohibition. These decisions are strictly the province of the State Wildlife Management Agencies. The Proposed Action would not change or affect any current laws on sport hunting or steel-jaw trapping in the area.

United States Department of the Interior

BUREAU OF MINES

P. O. BOX 25086
BUILDING 20, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

Intermountain Field Operations Center

October 23, 1984

Your reference:
1792 (934)
Rangely

Memorandum

To: Janis L. VanWyhe, Project Leader, Bureau of Land Management, Division of EIS Services, 555 Zang Street, Denver, Colorado 80228

From: Chief Intermountain Field Operations Center

Subject: Review of the Draft Environmental Impact Statement for the proposed Rangely Carbon Dioxide Pipeline, Wyoming, Utah, and Colorado.

Personnel of the Bureau of Mines have reviewed the draft EIS to determine whether mineral resources and recovery operations are adequately addressed. Potential environmental consequences resulting from construction, operation, and abandonment of a 176-mile long, 16-inch pipeline are analyzed in the document. The Preferred route would parallel existing roads and pipelines for 92 percent of its length. Two alternates, the Sand Wash Alternative Route and the No Action Alternative, also are discussed.

Both the Preferred and the Sand Wash Alternative routes would transect areas currently producing or known to contain such mineral resources as coal, petroleum and natural gas, trona, and oil shale. Potential conflicts between either the preferred or the alternate route and the minerals industry likely could be minimized through careful planning during early stages of the project and by using appropriate construction practices when transecting producing areas. The draft statement adequately addresses possible conflicts with the minerals industry and explains procedures to mitigate expected impacts.

10.1 Should the Sand Wash Alternative Route be selected, however, future versions of the EIS should identify and discuss possible impacts of constructing and operating the pipeline upon the Bean Springs Coal PRLA.

Donald P. Blasko

Donald P. Blasko

10.1 Thank you for your comment. Please see the Land Use Constraints and Conflicts section of the draft EIS (pages 84 and 85) where this concern has been recognized.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295

OCT 26 1984

Ref: 8PM-EA

Lanis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms. VanWyhe:

The Region VIII Office of the Environmental Protection Agency (EPA) has completed its review of the Rangely Carbon Dioxide Pipeline Draft Environmental Impact Statement (DEIS).

We note that prior to the writing of this document the Bureau of Land Management (BLM) conducted an extensive scoping process. EPA was a party to this process. The BLM is to be commended in its response to the scoping concerns expressed by EPA and the other respondents on the proposed activity.

The proposed action and its route as described in the DEIS, would appear to be an environmentally acceptable route in that it parallels existing roadways and/or pipelines for the major portion of its length (92%). Maximum use of existing transportation corridors is preferred. Since the proposed
11.1 pipline will parallel significant road mileage, additional discussion of possible health effects due to pipeline rupture would be helpful.

As we stated in our scoping comments, EPA will conduct a more detailed construction review of the specific river crossings during the Section 404 permit review process.

11.2 Based on our process for rating the adequacy of environmental impact statements, we recommend a rating of LO-2 for the Rangely Carbon Dioxide DEIS. This means that EPA has no objection to the proposed action but would like to see additional discussion, as noted, in the Final EIS. Please contact Mike Hammer of my office at (303) 844-2351 if we can be of further assistance in this matter.

Sincerely yours,

Dale Vodehnal

Dale Vodehnal, Chief
Environmental Assessment Branch

11.1 With the installation of the proposed block valves and SCADA terminals, the total release of CO_2 would be minimal. Also, CO_2 is not toxic and the probability of rupture is low. Consequently, possible health effects are practically nonexistent. For these reasons, no impacts were predicted. Of course, the possibility exists that the pipe could be ruptured by some piece of earth-moving equipment, such as a backhoe, in which case the resulting flying rocks and pieces of broken pipe could be fatal to the operator and any close observers. In addition, the rapidly expanding CO_2 could cause asphyxiation.

11.2 Thank you for your rating.

To: James L. VanWagenen 25 Oct 1984

From: Clifford & Lenora Smith, Grouse Creek Utah

Subject: Comment on Rangely Carbon Dioxide Pipeline

We have reviewed the DEIS and wish to make the following suggestions/comments:

12.1 1. The excess rock and gravel in Jesse Ewing Canyon could be used to stabilize Daggett Co. Rd 26056 (road to Parvie Historic Site) for 200' on either side of the cattle guard.

12.2 2. Ensure that degree of grade in Jesse Ewing Canyon is not increased as it was in the building of the MAPCO line.

12.3 3. If possible, reduce the overall grade and especially the 3 areas that are extremely steep that resulted during the MAPCO line Construction.

12.4 4. Daggett County should be compensated by specific funds for use of the roads, bridges and culverts that will be utilized by the contractors and his sub-contractors.

12.5 5. The personnel camping in the nondesignated campgrounds should be provided with litter bags and be monitored to ensure areas are not littered. Policing the area should not be the responsibility of the BLM personnel in the area.

Comments: Kanyeby Carbon Dioxide Pipeline, Cont'd.

We want to commend your agency for including the accessability thru Jesse Ewing Canyon and the Limited trailing requirements in this DEIS.

We thank you for the opportunity to Comment.

We Heartily Concur that Construction of the Carbon Dioxide line and the Phosphate Slurry line should be simultaneous.

Sincerely

Clifford and Donna Smith
Snyder Flat, Browns Park Utah
Daggett Co. Ut. Rt. 26056 Box 4
Mayfield, Co. 81640

-2-

12.1 Thank you for your suggestion. BLM Daggett County and BLM will work with Chevron to ensure that construction of the pipeline does not deteriorate the county roads near Jesse Ewing Canyon and elsewhere. In some cases, the roads will be slightly improved; however, this particular stretch is not currently under consideration.

12.2-12.3 During the simultaneous construction of the Proposed Action and the Chevron Phosphate Pipeline, both pipelines are planned for placement in the shoulder and edge of the road. The road will have no more than the 15 percent grade required for the phosphate pipeline. See Chapter 1 of the draft EIS for a description of construction through Jesse Ewing Canyon.

12.4 The county and the company will work together to determine necessary compensation.

12.5 Thank you for the suggested mitigation. Please see Appendix 1, Required General Federal Resource Measures, Waste Disposal section, for measures concerning waste.

United States Department of Agriculture

Soil Conservation Service

West National Technical Center
511 NW Broadway, Room 514
Portland, Oregon 97209-3489

October 24, 1984

Janis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms VanWyhe:

The Soil Conservation Service (SCS) has reviewed the draft EIS statement for Rangely Carbon Dioxide Pipeline. We have no objections to the proposals in this document if the specified "reclamation and erosion control procedures" are followed. We were pleased that the procedures included a provision for requesting SCS technical assistance to evaluate erosion control and soil conservation practices on disturbed private lands. This assistance will be sought from our SCS field offices for the various soil conservation districts involved. Following this procedure there should be minimal impacts to agricultural lands such as prime and important farmlands.

GEORGE C. BLUHM
Director

cc:
Sheldon Boone, State Conservationist, SCS, CO
Glen Loomis, State Conservationist, SCS, MT
Francis Holt, State Conservationist, SCS, UT
C. Maesner, Acting Head, Ecological Sciences, SCS, WNTC
F. Reckendorf, Environmental Resource Specialist, SCS, WNTC

Thank you for your assessment and comments, which will be considered in the decision-making process. Please be assured that the mitigation measures identified in Appendix 1 of this EIS (Appendix 3 of the draft) will be employed by the applicants.

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

OCT 25 1984

In Reply Refer To:
WGS-Mail Stop 423

Memorandum

To: Project Leader, Rangely Carbon Dioxide Pipeline, Bureau of Land Management, Denver, Colorado

From: Assistant Director for Engineering Geology

Subject: Review of draft environmental statement for Rangely Carbon Dioxide Pipeline, Wyoming, Utah, and Colorado

We have reviewed the draft statement as requested in the letter of July 25 from the State Director.

14.1 The right-of-way for the Sand Wash alternative would pass through the area of Iron Springs (p. 75). The statement should explain whether the springs would be affected and, if so, what mitigation is planned.

James F. Devine

14.1 No impacts to Iron Spring would occur.

EXXON COMPANY, U.S.A.
POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702

PRODUCTION DEPARTMENT
MIDCONTINENT DIVISION

THOMAS J. TIBBITTS
REGULATORY AFFAIRS MANAGER

October 30, 1984

Mrs. J. L. VanWyhe
Bureau of Land Management
Division of EIS Services
555 Zang Street, 1st Floor East
Denver, Colorado 80228

Dear Janis:

Attached are Exxon's comments on the Rangely Carbon Dioxide Pipeline, Draft Environmental Impact Statement.

Should you have any questions, please contact Michael Kunzig.

MBK:ag

Attachment

cc: w/Attachment
D. K. Kiltau, EPC
D. F. Forsgren, Chevron

EXXON COMPANY, U.S.A.
RANGELY CARBON DIOXIDE PIPELINE
DRAFT EIS COMMENTS

Cover Sheet and Summary

15.1 In a letter dated October 16, 1984 to Mr. Don Sweep, District Manager, Rock Springs District, Exxon submitted the following major revisions to the original ROW application submitted November 30, 1983.

- Exxon will build, own and operate the Shute Creek to Rock Springs portion of the pipeline from MP 2.1 to MP 48.9.
- The pipeline size will be 24 inch to MP 48.9 and 16 inch from there to Rangely.
- A future take-off-site consisting of an underground valve will be located at MP 26.5.
- A meter station consisting of a 1 (+) acre fenced area with three orifice meters, one scraper trap, a future take off valve, a control building and communications antenna will be located at MP 48.9.

Another revision we submit for the Exxon portion of pipeline concerns the SCADA system. The following describes in detail how this system will operate.

15.2
- The block valve facilities associated with this pipeline system will be as follows:
  - motor operated block valve and scraper trap at MP 2.3, downstream of metering facilities at the compressor plant site in Sweetwater County.
  - motor operated, intermediate block valve at MP 16.5.
  - motor operated, intermediate block valve at MP 26.5.
  - motor operated, intermediate block valve upstream of Green River at MP 37.8.
  - motor operated, intermediate block valve downstream of Green River at MP 38.5
  - incoming scraper trap and motor operated block valve at MP 48.9, upstream of metering facilities near Rock Springs.

The exact MP locations of these block valves are subject to change when the route survey and alignment drawings are completed. The block valve spacings will remain approximately the same.

- The control room at the Shute Creek Plant will be the communications and control center for the SCADA system associated with this pipeline. This control room will be manned 24 hours a day, 7 days a week. The SCADA system will monitor/control the following facilities:

  - metering facilities upstream of motor operated block valve and scraper trap at MP 2.3. (Pressure, flow rate, totalized flow, pressure alarms, and status alarms will be transmitted to the Shute Creek Plant control room.)

  - motor operated block valve and scraper trap at MP 2.3 (Valve status will be transmitted to Shute Creek. Operator will have remote control of the block valve.)

  - motor operated block valve and scraper trap at MP 48.9 (Valve status will be transmitted to Shute Creek. Operator will have remote control of the block valve.)

  - metering facilities downstream of motor operated block valve and scraper trap at MP 48.9 (Pressure, flow rate, totalized flow, pressure alarms, and status alarms will be transmitted to Shute Creek.)

The operator at the Shute Creek Plant control room will monitor the pressures, flow rates and pressure alarms at both the originating and delivery metering facilities. A comparison of the amount of CO_2 metered-in at the originating point versus the amount of CO_2 metered-out at the delivery point (or, in the future, at all delivery points) will also be continuously performed.

- A SCADA system can be used to perform two separate functions: operations monitoring/control and outage detection/reaction. The installation of SCADA (remote control/pressure monitoring) facilities at intermediate block valve sites is not of significant benefit in either of these functions. Neither will this type of installation contribute to outage prevention.

Outage prevention is accomplished by reducing the possibility of overpressure to a practical minimum, by installing and maintaining adequate cathodic protection, by clearly marking and maintaining pipeline rights-of-way, by periodic surveillance of the pipeline route, et cetera. Reducing the possibility of overpressure to a practical minimum is the most critical outage prevention measure and the only one which necessitates continuous monitoring (pressure) and control. These monitoring/control features as well as local fail safe features should be installed at the pressure originating point - not at intermediate or delivery points.

Outage detection by remote pressure monitoring is not practical on a pipeline system carrying a compressible fluid unless computer modeling is used. The most practical way to detect outages on this type of pipeline appears to be by meter-in/meter-out line balance using totalized flow data from the measurement facilities. For relatively large outages, pressures and flow rates at originating and delivery points combined with operating experience can provide some detection capability.

Outage reaction will be initiated by the operator at the Shute Creek Plant control room whether remote control facilities are installed or not. When a leak is reported (as almost 100% of leaks are reported by eyewitnesses) or suspected based on pipeline data, the operator will make a judgement decision on whether or not to shut the pipeline down.

The installation of remote control facilities at intermediate block valve sites can reduce the total product loss in case of an outage of a compressible fluid. These facilities will not reduce the size of the vapor cloud which is formed. The immediate shutdown of all pressure sources should always be considered the primary factor in limiting the quantity of fluid loss.

The spacing of the intermediate block valve sites is considerably less than originally proposed. Also, because CO_2 is a non-hazardous, non-contaminating fluid, the shutdown of the pipeline system can be accomplished in a safe, timely manner by emergency response of local operating personnel. Local personnel will be available at both the Shute Creek Plant and at Rock Springs to respond to emergencies over the 49 mile length of this pipeline.

This revision with the above revisions should be incorporated throughout this document. The following discuss other comments we have concerning the draft EIS.

Chapter 1

15.3 Page 7, Introduction:

- The first 26.5 miles should not be clasified differently from the rest of the pipeline. No conjecture should be made at this time as to whether the pipeline will be ultimately classified as common carrier.

15.4 Page 10, Table 1-1:

- The authority for the first action, "Grant right-of-way and issue temporary use permits" for "all facilities" should be both the Mineral Leasing Act and Federal Land Policy and Management Act. We feel it has yet to be finally determined under which act this permit will be issued.

15.5 Page 14, History and Background:

- Change to reflect current application as revised.

15.6 Page 14, Overview of Proposed Action and Alternatives:

- Change as above.

- CO_2 is more than just "a by-product of methane 'cracking'." This CO_2 is produced in the drill field in quantities exceeding methane production. From a production viewpoint, the gas plant produces several products, one of which is CO_2.

15.7

- The CO_2 specifications stated in the draft are revised to reflect a more stringent specification with respect to water vapor:

  - No more than 14 pounds of water per million standard cubic feet.

15.8 Page 15, Proposed Action Project Description:

- Change to reflect current application as revised and revisions submitted in these comments.

15.9 Page 17, Communications System:

- The Exxon portion of pipeline will have a separate communications system using an existing microwave tower. This system will insure both data and voice communications between the LaBarge Gas Plant, the meter site (MP 48.9). This system will also tie into Chevron's communications network.

15.10 Page 20, Construction:

- Spread I will build Exxon's portion of the line and require 155 workers.
- Both Exxon and Chevron will have pipeline and welding storage yards located in Rock Springs.

15.11 Page 25, Operation:

- Change to reflect previously mentioned revisions.

15.12 Appendix 3

Page 114, Special Federal Mitigation Measures:

- Special attention should be made to delineating federal mitigation measures among the two participating companies.

15.1- See Chapter 1 of this EIS for descriptions of all project changes
15.2 and new components as submitted by Exxon, Chevron, and BLM. The Errata Summary does not repeat this information but includes some changes to the draft EIS Chapter 1 that are not in Chapter 1 of this EIS.

15.3 Thank you for your comment. Please see the Errata Summary for revision to page 7 of the draft EIS.

15.4 Please see the response to comment 7.2.

15.5- Thank you for the new information. See Errata Summary for
15.7 corrections to page 14 of the draft EIS.

15.8 Thank you for this information. Please see Chapter 1 of this EIS for project description changes.

15.9- Thank you for this information. Please see Chapter 1 of this EIS
15.11 for project description changes.

15.12 All mitigation measures identified in Appendix 1, Required Federal Measures (formerly Appendix 3 in the draft EIS), will be required of both Chevron and Exxon except those that are site-specific to a particular area to be crossed by one company or another. If, during preparation of the Construction and Operation Plan, any question arises, please discuss it with your BLM district contact.

Chevron
ORTHO
Chevron Chemical Company
505 Broadway, Rock Springs, Wyoming
Mail Address: P.O. Box 1328, Rock Springs, WY 82901

Fertilizer Division

October 29, 1984

DRAFT EIS COMMENTS
RANGLEY CO_2 PIPELINE

Janice VanWhye
Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang St., First Floor East
Denver, CO 80228

Dear Janice:

The following are Chevron's comments on the Draft EIS for your consideration in preparing the Final EIS.

	Page	Column	Paragraph/Line	Comments
	14	2	1	Since Exxon will have responsibility for the first 49 miles of the pipeline, they will be submitting comments for this segment.
16.1	15	1	1	Before "SCADA" insert "scraper trap".
16.2	17	1	Scraper Trap	Since Exxon will be building the first 48.9 miles of the pipeline, the location of this Rock Springs scraper trap will be moved to milepost 48.9 at the metering station. This will require a scraper launcher instead of a trap. After "U.S. Highway 191" insert "The scraper trap at milepost 90 would be located near the phosphate slurry booster station in the NW ¼ of Section 15, T12N, R105W. Power for the scraper traps . . ." Last line of this paragraph should be changed to read "powerline to the Rock Springs scraper launcher. The Richards Gap power is available from the booster station.
16.3	20	1	2/6	Replace the rest of this paragraph and everything up to the second paragraph in Column 2 with the following: "Three spreads would be needed to build the pipeline. Spread I would build Exxon's portion of the line, from the LaBarge gas plant to MP 49 and would require 155 workers. (The maps

	Page	Column	Paragraph/Line	Comments
16.3 cont.				in Appendix 1 show the mileposts for the route. The milepositing starts from the LaBarge gas plant, but the EIS analyzes from the compressor station, which is 1.5 miles from the plant.) Spread II would build Chevron's portion of the mainline, from MP 49 to MP 176 at Rangely, and would require 215 workers. The third spread would be a smaller specialized spread and would construct the line through difficult areas such as Red Creek Rim Escarpment, Jesse Ewing Canyon, and the Green River crossing in Brown's Park and Jensen, Utah. The third spread would require 77 workers. The mainline pipe segment from MP 67 to MP 123 could be built simultaneously with the Chevron Phosphate pipeline during the summer of 1985. For this EIS, simultaneously means that the spread construction would be carried out separately for each pipeline but would occur during the same summer. Activities would be merged as much as physically and contractually possible. "Two pipeline welding and storage yards would be located at Rock Springs, Wyoming; one for Exxon's portion of the line and one for Chevron's portion. The pipe and equipment for Spread I would be hauled from Rock Springs via Interstate 80 and Wyoming State Highway 372. Pipe and equipment for Spreads II and III would be hauled from Rock Springs via Interstate 80, U.S. Highway 191 and 40, Utah State Highway 149, and Colorado State Highway 64. Various unnumbered county and private gravel and dirt roads would be used by all spreads to provide access from the major roads to the project right-of-way. "The construction right-of-way would be 100 feet wide for Spread I and where Spreads II and III do not parallel Chevron's Phosphate Pipeline. Where Spreads II and III do parallel the Phosphate Pipeline, a 75-foot right-of-way is all that is needed."
16.4	26	1	4/1	After "The Rock Springs" insert "and Richards Gap".
16.5	104	1	1a	Requirements for the Jensen crossing of the pipeline should be included in the final EIS. We assume there will be some seasonal restrictions.
16.6	109	2	1st Partial/2	Delete everything after "required by the Wyoming" and insert "State Land Board".
16.7	113	2	Construction Procedure	Delete the first sentence of Item #1 and all of Item #2. These were taken from the phosphate EIS and apply to the plant site not the CO_2 pipeline.

	Page	Column	Paragraph/Line	Comment
16.8	114	1	Item 10	Delete "aircraft warning" and insert "safety". Again, this was taken from the phosphate EIS and refers to the plant facilities.
16.9	115	1	Item 3	This is redundant. The SCADA system provides the protection.
16.10	115	1	Item 4	Delete - this measurement applies only to the phosphate EIS.

Thank you for your consideration of these comments.

Sincerely,

Dean F. Forsgren
Environmental & Permitting Coordinator

DFF/dp

cc: P. L. Rushing
M. D. Peck
L. E. Johnson
J. M. West
Mike Kunzig - Exxon

16.1 Thank you for this information. Please see the Errata Summary for change to page 15 of the draft EIS.

16.2 See Chapter 1 of this EIS for project description changes and Errata Summary for changes to page 17 of the draft EIS.

16.3 See Chapter 1 of this EIS for project description changes.

16.4 Thank you for this information. Please see the Errata Summary for change to page 26 of the draft EIS.

16.5 Seasonal restrictions for the Jensen crossing (MP 143) have been identified. Please see revised Appendix 1 in this EIS.

16.6 Thank you for this information. Please see revised Appendix 1 in this EIS.

16.7 Thank you for this information. Please see revised Appendix 1 in this EIS.

16.8 Please see revised Appendix 1 for change.

16.9 BLM agrees; the SCADA system and block valves proposed by both companies at all river crossings make this measure no longer necessary for the Rangely CO_2 pipeline. Please see revised Appendix 1 for deletion.

16.10 Thank you for this information. Please see revised Appendix 1.

MOUNTAIN FUEL RESOURCES, INC.

P.O. BOX 11450 - 79 SOUTH STATE STREET, SALT LAKE CITY, UTAH 84147 PHONE (801) 530-2400

October 26, 1984

Janis L. Van Wyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Re: Rangely Carbon Dioxide Pipeline Draft Environmental Impact Statement.

Dear Ms. Van Wyhe:

Mountain Fuel Resources, Inc. comments relating to the Rangely carbon dioxide pipeline draft environmental impact statement are as follows:

17.1 At Clay Basin, Utah, Mountain Fuel Resources has developed an underground gas storage project. The proposed CO_2 pipeline could cause potential impacts to present activities and future plans. This impact could be overcome through proper coordination between Chevron and Mountain Fuel Resources. It is Resources' desire to work closely with Chevron in order to avoid conflicts with the storage project.

17.2 In addition, a potential impact could be encountered at Richard's Gap north of Clay Basin. Richard's Gap consists of a steep, narrow pass with Red Creek cutting into the gap. Resources' Transmission Lines 58 and a MAPCO liquid products pipeline traverse the area. If the proposed route is selected, it would be desirable that Chevron coordinate its activities in this area with the aforementioned companies to avoid conflicts with existing facilities.

17.3 Many portions of the proposed alignment are shown as paralleling other Mountain Fuel Resources' pipelines. It is essential that Resources be involved in the site-specific location of the CO_2 pipeline to avoid potentially adverse impacts to our facilities.

Respectfully yours,

David C. Flaim

David C. Flaim
Coordinator Environmental Affairs

DCF:lb

17.1 BLM agrees that Mountain Fuel Resources and applicants should work together to avoid potential impacts or conflicts. All comment letters have been forwarded to Chevron and Exxon.

17.2- BLM agrees and expects the applicants to coordinate with MAPCO,

17.3 Mountain Fuel Resources, and any other entity with whom they would share a corridor.

STATE OF COLORADO RICHARD D. LAMM, Governor
DEPARTMENT OF NATURAL RESOURCES
DAVID H. GETCHES, Executive Director
1313 Sherman St., Room 718, Denver, Colorado 80203 866-3311

Geological Survey
Board of Land Commissioners
Mined Land Reclamation
Division of Mines
Oil and Gas Conservation Commission
Division of Parks & Outdoor Recreation
Soil Conservation Board
Water Conservation Board
Division of Water Resources
Division of Wildlife

October 26, 1984

Ms. Janis L. Van Wyke
U.S. Bureau of Land Management
555 Zang Street
Denver, Colorado 80228

Dear Ms. Van Wyke:

Colorado state agencies have reviewed the Rangely Carbon Dioxide Pipeline Draft Environmental Impact Statement. The Division of Wildlife, Oil and Gas Conservation Commission, Soil Conservation Board and Department of Highways have submitted comments. This letter and attachment constitute the state's response to the DEIS review.

Wildlife

The Division of Wildlife supports the preferred alternative and has no specific comments on the document.

18.1 Oil and Gas Resources

The Oil and Gas Conservation Commission has no specific comments on the pipeline but does present information on the impacts of enhanced recovery of oil from the Rangely Field. See the attached memorandum and supporting documentation.

Soils and Reclamation

The draft EIS contains good general planning information on soils, water, and reclamation.

Considering the length of the pipeline and the area of disturbance, it is not feasible to include site-specific reclamation information. However, adequate reclamation information is provided to describe what will be done given anticipated site conditions.

18.2 One item of concern is the use of rock mulch on steep slopes. This practice can be used successfully, but surface water should not be concentrated on the slopes. Consideration should be given to diverting it in order to prevent gullying beneath the rock mulch.

If reclamation is carried out as described in the document, soil erosion and subsequent water quality impacts should be minimal.

Transportation

18.3 Table 1-1, Major Federal, State, County, and Local Authorizing Actions, should include permits required by the Colorado Department of Highways (CDOH). Any new access point onto the state highway system will require access permit applications and permits from CDOH. Also, any crossing of highways in the area of the project will require utility crossing permits. These permits may be obtained from the CDOH's Craig office at 270 Ranney Street, Craig, Colorado 81625. Also all references to the

18.4 Colorado Department of Transportation should be changed to the Colorado Department of Highways.

18.5 The document needs to provide more discussion of mitigation measures for the impacts to the transportation system, such as timing of construction related traffic and employee ridesharing measures.

Thank you for the opportunity to comment on this Draft EIS. Please contact Steve Norris of my office if you have any questions or wish to discuss our response.

Sincerely,

DAVID H. GETCHES
Executive Director

DHG:ljc

STATE OF COLORADO
OIL AND GAS CONSERVATION COMMISSION
DEPARTMENT OF NATURAL RESOURCES
ROOM 721, CENTENNIAL BUILDING
1313 SHERMAN STREET
DENVER, COLORADO 80203

WILLIAM R. SMITH
Director

FRANK J. PIRO
Deputy Director

(303) 866-3531

RICHARD D. LAMM
Governor

October 25, 1984

M E M O R A N D U M

TO: Steve Norris, Dept. of Natural Resources

FROM: William R. Smith, Director Oil and Gas Conservation Commission

SUBJECT: Rangely Carbon Dioxide Pipeline EIS #83-127
Draft, Environmental Impact Statement

The Oil and Gas Conservation Commission has reviewed the subject impact statement. Although we do not have any specific comments on the pipeline it is important that you be advised of the impact on enhanced recovery of oil from the Weber Sand reservoir in the Rangely Field.

On November 21, 1984 the Oil and Gas Conservation Commission heard an application by Chevron USA for an order approving a tertiary recovery project by injecting carbonated water into the Weber formation underlying the Weber Sand Unit Area in Rio Blanco, Colorado. The Commission issued their Order No. 2-37 approving the project after finding it would have a significant effect on ultimate recovery of crude oil from the reservoir. A copy of the order is attached.

Evidence presented at the hearing indicated the following significant facts regarding the Weber Sand reservoir underlying the unit area:

Original oil in place	1,578,000,000	barrels
Cumulative Oil Prod.(9/1/83)	657,200,000	"
Cumulative Water Inj.(9/1/83)	2,230,000,000	"
Daily Oil Prod.(August, 1983)	37,062	"
Remaining Oil Reserves(9/1/83)		
Waterflood Only	11,400,000	"
With Carbonated Injection	14,000,000	"
Additional Recovery	2,600,000	"

Rangely is the largest producing field in the State producing approximately one-half of the present daily production. The economical impact to the State is threefold. First is the state share of federal royalty which is hard dollars to the State. This amounts to approximately 7.4% of the total 2,600,000 barrels which at todays price of $27 per barrel amounts to $5,160,000 or $2,580,000 returned to Colorado.

The second economic impact is a result of taxes on the remaining $65,040,000 in the form of ad valorem tax, severance tax, and conservation tax. The third impact is a result of salaries, products and services that result from the operation.

Rangely Weber Sand Unit

Basic Reservoir Data

Physical Reservoir Features	
Formation	Weber Sandstone
Age	Pennsylvanian
Structure	Anticlinal
Average Depth	6400 ft.
Original Oil/Water Contact	-1150 ft. subsea
Original Gas/Oil Contact	-310 ft. subsea
Average Net Pay	117 ft.
Unit Surface Area	19,153 acres
Fluid and Rock Properties	
Initial Reservoir Pressure (-900 ft. subsea)	2762 psi
Reservoir Temperature (-900 ft. subsea)	160°F
Oil Gravity	35°API
Original Bubble Point Pressure (-900 ft. subsea)	2072 psi
Original Solution GOR	271 SCF/STB
Original Oil Formation Volume Factor at Bubble Point Pressure	1.15 RB/STB
Oil Viscosity at Bubble Point Pressure	1.10 cp
Average Porosity	14.5%
Average Permeability	25 md
Original Oil in Place, million STB	1578
Cumulative Oil Produced, million STB (9/1/83)	657.2
Cumulative Water Injected, million BBLS (9/1/83)	2,230
Current Production (August 1983)	
Oil, Bbl/Day	37,062
Water, Bbl/Day	413,054
Unitized	1957
Initiated Waterflood	1958

CHEVRON U.S.A. INC.
EXHIBIT NO. 2
OIL & GAS DOCKET NO. 2
DATE 10-17-83
11-21-83

RANGELY WEBER SAND UNIT
CARBONATED WATERFLOOD PROJECT

PROJECT AREA	1710 ACRES
CURRENT PRODUCTION (AUGUST 1983)	
OIL	6,101 BOPD
WATER	37,800 BWPD
AVG. OIL PRODUCTION DURING 6 MONTH PERIOD ENDING 3/31/79	6,107 BOPD

WELL STATUS	CURRENT	PROPOSED
TOTAL INJECTORS:	33	33
CARBONATED WATER	0	28
WATER ONLY	29	4
SHUT-IN	4	1
TOTAL PRODUCERS:	78	78
ACTIVE	71	72
SHUT-IN	7	6

CUMULATIVE OIL PRODUCED THRU 8/31/83	43,566,463 STB
REMAINING OIL RESERVES (9/1/83)	
A) WITH CARBONATED WATER INJECTION	14.0 MILLION STB
B) CONTINUED WATERFLOOD ONLY	11.4 MILLION STB
ADDITIONAL RECOVERY FROM CARBONATED WATERFLOOD	2.6 MILLION STB
EXPECTED START OF CARBONATED WATER INJECTION	1ST QTR., 1984
EST. PROJECT FUTURE REVENUE	$584 MILLION
EST. PROJECT COSTS	
CAPITAL INVESTMENT	$3.1 MILLION
OPERATING COST	52.0 MILLION
ROYALTY	73.0 MILLION
WINDFALL PROFIT TAX	18.1 MILLION
PRODUCTION & PROPERTY TAX	31.4 MILLION
TOTAL COST	$177.6 MILLION

CHEVRON U.S.A. INC.
EXHIBIT NO. 7
OIL & GAS DOCKET NO. 2
DATE 10-17-83

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE PROMULGATION AND ESTABLISHMENT OF FIELD RULES TO GOVERN OPERATIONS IN THE RANGELY FIELD, RIO BLANCO COUNTY, COLORADO	))))	CAUSE NO. 2 ORDER NO. 2-37

REPORT OF THE COMMISSION

This cause came on for hearing before the Commission on November 21, 1983 at 9:00 a.m., in the Old Supreme Court Chambers, 2and Floor, State Capitol Building, Denver, Colorado, after giving Notice of Hearing as required by law, on the application of Chevron U.S.A., Inc., for an order approving a tertiary recovery project by injecting carbonated water into the Weber formation underlying the Weber Sand Unit Area, Rio Blanco County, Colorado, pursuant to the provisions of 26 U.S.C.A., Section 4993.

FINDINGS

The Commission finds as follows:

1. Chevron U.S.A., Inc., as applicant herein, is an interested party in the subject matter of the above-referenced hearing.

2. Due notice of the time, place and purpose of the hearing has been given in all respects as required by law.

3. The Commission has jurisdiction over the subject matter embraced in said Notice, and of the parties interested therein, and jurisdiction to promulgate the hereinafter prescribed order.

4. On November 2, 1983, pursuant to Internal Revenue Service Code Section 4993 (d)(5)(A)(i), Richard D. Lamm, Governor of the State of Colorado, appointed the Colorado Oil and Gas Conservation Commission as the jurisdictional agency to approve projects for enhanced recovery of crude oil in the State.

5. Evidence presented at the hearing indicates that the project will prevent waste and protect correlative rights and that:

(a) the carbonated water tertiary enhanced recovery project involves the application, in accordance with sound engineering principles, which can reasonably be expected to result in more than an insignificant increase in the amount of crude oil which will ultimately be recovered;

(b) the commencement date of the Rangely Weber Sand Unit carbonated water tertiary enhanced recovery project is after May, 1979;

(c) the portion of the Rangely Weber Sand Unit Area which will be affected by the project has been adequately delineated in Exhibit 1 and 1-a.

6. Pursuant to such evidence, the project should be approved.

ORDER

NOW, THEREFORE, IT IS ORDERED, that the application of Chevron U.S.A., Inc., for a tertiary enhanced recovery project by injection of carbonated water into the Weber formation underlying certain lands in the Rangely Weber Unit Area, Rio Blanco Colorado, is hereby approved.

IT IS FURTHER ORDERED, that the provisions contained in the above order shall become effective forthwith.

IT IS FURTHER ORDERED, that the Commission expressly reserves its right, after notice and hearing, to alter, amend or repeal any and/or all of the above orders.

ENTERED this 20th day of December, 1983, as of November 21, 1983.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By Frank J. Pirs
Frank J. Pirs, Secretary

Richard D. Lamm
Governor

COLORADO DEPARTMENT OF NATURAL RESOURCES
STATE SOIL CONSERVATION BOARD
STEVEN W. HORN, Ph.D., Director

MEMORANDUM

TO: Adam Poe

FROM: Terry Keane

DATE: October 24, 1984

SUBJECT: Rangely Carbon Dioxide Pipeline

The draft EIS contains good general plannning information on soils, water, and reclamation.

Considering the length of the pipeline and the area of disturbance, it is unfeasible to include site-specific reclamation information. But, adequate reclamation information is provided describing what will be done given anticipated site conditions.

One item of concern is the use of rock mulch on steep slopes. This practice can be used successfully, but surface water should not be concentrated on the slopes, and it should possibly be diverted to prevent gullying beneath the rock mulch.

If reclamation is carried out as it is written, soil erosion and subsequent water quality impacts should be minimal.

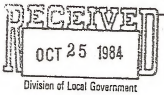
TEK/vaw

814 Centennial Building, 1313 Sherman Street Denver, Colorado 80203 Telephone (303) 866-3351

STATE OF COLORADO

DEPARTMENT OF HIGHWAYS

4201 East Arkansas Ave.
Denver, Colorado 80222
(303) 757-9011



October 22, 1984

Mr. Ross Fraser
State Clearinghouse
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Mr. Fraser:

The Colorado Department of Highways has completed its review of the Draft Environmental Impact Statement for the Rangely Carbon Dioxide Pipeline and has the following comments.

Table 1-1, Major Federal, State, County, and Local Authorizing Actions, should include permits required by the Colorado Department of Highways. Any new access point onto the State highway system will require access permit applications and permits from this Department. Also, any crossing of highways in the area of the project will require utility crossing permits. These permits may be obtained from the Department's Craig office at 270 Ranney Street, Craig, Colorado 81625. Also all references to the Colorado Department of Transportation should be changed to the Colorado Department of Highways.

The document needs to provide more discussion of mitigation measures for the impacts to the transportation system, such as timing of construction related traffic and employee ridesharing measures.

Thank you for the opportunity to provide comments on this document.

Very truly yours,

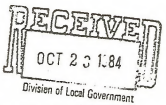
Harvey R. Atchison
Director
Division of Transportation Plannint

by for Barbara L. S. Chocol
Manager
Project Development Branch

REG/hs

Divisional Correspondence Only

STATE OF COLORADO
DIVISION OF WILDLIFE
DEPARTMENT OF NATURAL RESOURCES



DATE: October 19, 1984

TO: State Clearinghouse

FROM: Al Whitaker
Wildlife Program Specialist

RE: Rangely Carbon Dioxide Pipelines - DEIS - BLM

Appropriate personnel from this agency have reviewed the above-referenced document. We have no specific comments, but support the preferred alternative.

AW/jh

DOW-A-F-8

18.1 Thank you for the information; it will be used in the decision-making process.

18.2 Rock mulches are a special mulching practice recommended on steep-sloping, rocky areas with low precipitation. The water will assuredly be diverted using water bars on steep slopes to prevent gullying beneath the mulch.

18.3 Thank you for the information. Please see Errata Summary for addition to page 11 of the draft EIS.

18.4 Thank you for this information. Please see the Errata Summary for changes to pages 63, 84, and 147 of the draft EIS.

18.5 Thank you for your suggestion concerning mitigation measures for potential transportation impacts. These concerns and possible measures will be brought to the attention of the applicants for consideration.

STATE OF WYOMING
OFFICE OF THE GOVERNOR
CHEYENNE 82002

ED HERSCHLER
GOVERNOR

October 30, 1984

Mrs. Janis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, CO 80228

Dear Mrs. VanWyhe:

The draft environmental impact statement on the proposed Rangely Colorado Carbon Dioxide Pipeline project has been circulated for state agency review. Copies of agency comments are enclosed for your consideration and use. You will note that there is widespread support for the project as a means of providing a market for the CO_2 that will be produced at Exxon's La Barge gas processing plant. There is also general concurrence with the proposed pipeline routing, mitigation measures, and impact controls. I strongly encourage the BLM to approve the Rangely CO_2 Pipeline project in an expeditious manner so that the pipeline construction can be completed in 1985 as currently scheduled.

Thank you for the opportunity to review and comment on this project. Please keep me informed of the progress in this effort.

Yours sincerely,

Ed Herschler

EH:pcl

Enclosures

THE STATE OF WYOMING
EXECUTIVE DEPARTMENT

ED HERSCHLER
GOVERNOR

Office of Industrial Siting Administration

SUITE 500 BOYD BUILDING CHEYENNE, WYOMING 82002 TELEPHONE: 307-777-7368

October 29, 1984

Mr. Dick Hartman
State Planning Coordinator
Wyoming State Clearinghouse
2320 Capitol Avenue
Cheyenne, Wyoming 82002

Re: Rangely Carbon Dioxide Pipeline EIS, SIN-84-165

Dear Dick:

The Industrial Siting Administration Staff has reviewed the Rangely Pipeline EIS. We formerly reviewed the CO_2 pipeline in conjunction with permitting of the Exxon LaBarge Project. The Staff concurs with the proposed routing and required mitigation measures and impact controls.

Thank you for the opportunity to comment.

Yours truly,

Richard C. Moore

Richard C. Moore, P.E.
Director

RCM/TC/ib

State of Wyoming
Oil and Gas Conservation Commission

September 24, 1984

Mr. Dick Hartman
State Planning Coordinator's Office
Wyoming State Clearinghouse
2320 Capitol Avenue
Cheyenne, WY 82002

Re: The Rangely Carbon Dioxide Pipeline,
State Identifier 84-165

Dear Mr. Hartman:

I am in receipt of a draft Environmental Impact Statement on the above-noted project.

In September of 1983, the Wyoming Oil and Gas Conservation Commission held a hearing which resulted in allowing Exxon Corporation approval to vent all the carbon dioxide and the other non-hydrocarbon gases produced from the Lake Ridge, Fogarty Creek, and Graphite fields, all of which are part of the greater Riley Ridge Area. This approval was based on the allegation at the hearing by Exxon that there was no readily available market for CO_2 . The admonition of the Commission to Exxon was that they actively pursue a market for the CO_2 and report to the Commission annually about their progress. When we heard that Chevron was interested in obtaining the CO_2 which Exxon planned to vent, I must say that I was delighted. CO_2, as you know, has a beneficial use in tertiary miscible floods. This project will not only provide a market for that gas in Colorado, but we now also understand that there may be some additional gas pipelined as far east as Lost Soldier-Wertz fields in Carbon and Sweetwater counties. From there to the Powder River Basin seems like the next logical step.

For your information, oil and gas operators who are presently paying Windfall Profits Tax based on Tier I oil are entitled to a reduction on that tax from 70% to 40%, providing the Wyoming Oil and Gas Conservation Commission supervises the project as a bonafide tertiary recovery project. Injection of CO_2 into a reservoir is a tertiary recovery project.

I urge the approval of this pipeline project wholeheartedly, and hope that there will be little or no delays in getting it under way. Development

777 WEST FIRST STREET, P.O. BOX 2640, CASPER, WYOMING 82602 (307) 234-7147

drilling in the area is proceeding, and we have recently processed a number of Applications for Permit to Drill. It is also my understanding that the plant construction is beginning and it is, therefore, important that the pipeline project be approved.

Very truly yours,

Donald B. Basko

DBB:wal

Donald B. Basko,
State Oil and Gas Supervisor

THE STATE OF WYOMING

Ed Herschler, Governor
Leno Menghini, Superintendent and Chief Engineer

Wyoming State Highway Department

P. O. BOX 1708 CHEYENNE, WYOMING 82002-9019

September 25, 1984

DEIS Comments
Rangely Carbon Dioxide Pipeline
State ID 84-165

Mr. Dick Hartman
State Planning Coordinator
Wyoming State Clearinghouse
122 West 25th Street
Cheyenne, WY 82002

Dear Mr. Hartman:

We offer the following comments concerning the subject pipeline:

19.1 1. The pipeline will follow Wyoming Highways 372 and 191 for considerable distance. We recommend that it be so located to allow "breathing" room between it and the highways and other utilities. This will avoid the "strangulation" effect that often occurs when linear facilities are located adjacent to each other. In these instances, an adjustment, upgrading or repair to one facility often necessitates extensive and costly adjustments to adjacent facilities.

19.2 2. Crossings or other encroachments on state highway rights of way must be approved by the Highway Department. The approving officer for this proposal is:

Mr. A. V. DeBernardi
District Engineer
Wyoming State Highway Department
P. O. Box 1260
Rock Springs, WY 82902

19.3 | 3. Editorial, Page 63. Wyoming has no State Department of Transportation. The agency cited is the Wyoming State Highway Department.

Very truly yours,

William P. King

William P. King, P. E.
Environmental Services Engineer

WPK/HCU/mg

cc: A. D. DeBernardi
District Engineer
Rock Springs

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

State Engineer's Office

HERSCHLER BUILDING CHEYENNE, WYOMING 82002

September 28, 1984

M E M O R A N D U M

TO: Paul Cleary, Natural Resources Analyst
State Planning Coordinator's Office

FROM: Louis E. Allen, Water Resources Engineer LEA

SUBJECT: State Identifier No. 84-165, Rangely Carbon Dioxide Pipeline, Draft EIS, BLM, August 1984.

I have reviewed the subject DEIS, and I see no major problems from this office with implementation of either the Proposed Action or the Sand Wash Alternative. I do have a few comments to offer.

19.4 1. Table 1-1, pages 10-12, fails to note the necessity of a Wyoming State Engineer Permit for acquiring water in Wyoming for construction and hydrostatic testing. Further, the approval of the Wyoming State Engineer is needed if up to 1,000 acre-feet of water is to be moved out of Wyoming, or of the Wyoming State Legislature if the quantities exceed 1,000 acre-feet. This does not seem to be mentioned anywhere in the DEIS, except on page 23. In the second column, third paragraph, we find the estimated 10 acre-feet of hydrostatic test water "...would be obtained through negotiations with local authorities who control the water resources". In Wyoming, the water laws of the State must be followed.

19.5 2. On page 42, the third from last and next to last sentences of the Aquatic Wildlife section seem to be contradictory.

19.6 3. On page 48, Water Resources, Affected Environment, first paragraph, the average annual discharge of the Green River, Utah, is given as 4,563,000 acre-feet. On page 76 in a corresponding location but in the second paragraph, this discharge is given as 3,122,000 acre-feet. The discrepancy should either be corrected or explained.

Thank you for the opportunity to review this DEIS and to offer comments. Your referral memorandum is being returned as requested.

LEA/ht

cc: George L. Christopulos
State Engineer

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

OCT 02 1984

WYOMING RECREATION COMMISSION

122 WEST 25TH CHEYENNE, WYOMING 82002

ALVIN F. BASTRON, P.E.
Director
777-7695

October 1, 1984

Mr. Dick Hartman
State Planning Coordinator
Wyoming State Clearinghouse
2320 Capitol Ave.
Cheyenne, WY 82202

RE: 84-165

Dear Mr. Hartman:

The Draft Environmental Impact Statement (DEIS) for the Rangely Carbon Dioxide Pipeline was received by this office on September 19, 1984. Thank you for the opportunity to review the document and participate in the review process.

19.7 Of immediate concern to the Wyoming Recreation Commission (WRC) is the impact the proposed pipeline project would have on regional outdoor recreation opportunities. Unfortunately, the DEIS does not provide a realistic look at potential project-related recreation impacts, nor does it propose any substantive measures geared towards mitigating recreation impacts.

While the DEIS claims that the impact of the proposed pipeline on dispersed and developed recreation opportunities would be minimal and insignificant (DEIS, pp. 3), very little documentation is presented to help substantiate this claim. The DEIS goes on to state that ... "Because of the number of facilities in the area, the increased use of any one recreation site is not expected to exceed the 10% significance criterion." (DEIS, pp. 61). However, it is not clear exactly how this was determined since no figures are presented to support this contention. Apparently it is being assumed that any increase in outdoor recreation demand which results from the project would spread out evenly over the various developed recreation sites within the project area. This is simply not true. By their very nature, some sites (such as Flaming Gorge, N.R.A.) will attract a disproportionately larger amount of use than other sites which are off the beaten path and limited in the scope of facilities provided.

19.7 cont. Further, the DEIS assumes that demand for dispersed recreation will increase proportionally to the project-related population increase (i.e., the construction force), and consequently would not exceed the 10% significance criterion over projected baseline conditions. However, a major portion of the population increase would probably be young, single males earning a relatively high wage. The WRC has found that this segment of the population has traditionally placed the greatest demand on recreation resources. Therefore, the recreation demand in the project area would most likely increase at a greater rate than the proportional population increase.

19.8 In light of the above discussion, it is unfortunate that the DEIS does not propose any mitigation measures aimed at alleviating or at least reducing project-related recreation impacts. The required mitigation procedures outlined in Appendix 3 of the DEIS are fine in and of themselves, however none of the measures specifically deal with recreation. Since this proposed CO_2 pipeline is dependent upon and directly related to Exxon's Riley Ridge Natural Gas Project and Chevron's Phosphate Project, the mitigation plan should be comprehensive in scope and developed in coordination with other commercial interests in the project area.

19.9 An additional concern of the WRC would be the possible impact the proposed CO_2 pipeline would leave on potential recreation lands in Sweetwater County. An inventory of potential recreation lands in the coal regions of Wyoming was recently conducted by the WRC. The DEIS has concluded that construction of the pipeline could affect the regional landscape character and would significantly impact visual quality in areas of high scenic quality. Of particular concern would be those areas that have been identified as having high or medium recreation value on the potential recreation lands inventory. Consequently, special effort should be made to minimize visual impacts to the following sections of land:

Township	Range	Section	Owner	Current Use	Overall Recreation Value (A=High, B=Medium, C= low
18	107	6	Private	Light Industry	B
19	108	36	State	Grazing	A
12	105	15	Federal	Grazing	B
13	105	22	Federal	Light Industry	B

As long as the above concerns are adequately addressed, the WRC sees no additional problems associated with the DEIS and would not oppose the identified preferred alternative.

If you have any questions regarding this review, or desire additional information, please do not hesitate to contact this office.

Sincerely,

For: Alvin F. Bastron, P.E.
Director

By: Dennis J. Krionderis
Chief, State Parks Division

DJK/MF/lr

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Game and Fish Department

CHEYENNE, WYOMING 82002

W. DONALD DEXTER
DIRECTOR

October 10, 1984

EIS 2348/L3
USDI/BLM Rock Springs
District-Shute Creek
Rangely Carbon Dioxide
Pipeline

Mr. Dick Hartman
State Planning Coordinator
Herschler Bldg.
Cheyenne, WY 82002

Attention: Mr. Warren White

Dear Mr. Hartman:

We have reviewed this DEIS and offer the following comments in order that the final document will be more complete and accurate in considering wildlife resources.

1. In general, we support the proposed action. It follows existing pipeline corridors, minimizing surface disturbance. The Sand Wash Alternative is less desireable because it bisects mule deer winter range.

19.10 2. Some features of seasonal distribution are missing from Map Al-3. No summer and winter ranges are shown for the West Green River Antelope Herd Unit.

19.11 3. Page 104 of the DEIS discusses the restricted construction schedule which will be followed to prevent interference with fish spawning activity. In recent years an early run of kokanee salmon has developed in the Green River. To prevent impacting this population of kokanee salmon, we request that timing of construction activities be further restricted at this crossing to preclude any construction after September 15 and before March 1. Also, the restriction of no construction from April 1 to June 30 for the protection of spawning rainbow trout, as stated in the document, should be followed.

19.12 4. The DEIS also states that any exceptions to the above restricted construction schedule must be approved by the authorized officer. We request consultation with the Game and Fish Department before any exceptions are granted. If it is determined that requested construction during the restricted period would cause an impact to fish movement and reproduction, such exceptions should not be allowed. This is in keeping with recently amended Corps of Engineers regulations regarding nationwide permits which state that "the activity will not significantly disrupt the movement of those species of aquatic life indigenous to the waterbody" Section 330.5(6)(4); "discharges in spawning areas during spawning seasons shall be avoided" Section 330.6 6(2); and "discharges shall not restrict or impede the movement of aquatic species indigenous to the waters. . ." Section 330.6(3).

Please forward these comments to the appropriate Federal Agencies and contact this office or our Area Fisheries office or District Game Division office in Green River if we may be of further help.

Sincerely,

FRANCIS PETERA
ASSISTANT DIRECTOR
OPERATIONS
WYOMING GAME AND FISH

FP:HBM:ssc
cc: Game Div.
Fish Div.

Wyoming Since 1933

THE GEOLOGICAL SURVEY OF WYOMING
UNIVERSITY OF WYOMING
BOX 3008, UNIVERSITY STATION
LARAMIE, WYOMING 82071
(307) 742-2054 (307) 721-3920 (307) 766-2286

MEMORANDUM

To: State Planning Coordinator
From: Gary B. Glass, State Geologist
James C. Case, Environmental Geologist
Subject: Rangely Carbon Dioxide Pipeline
(State Identifier 84-165)
Date: October 22, 1984

We have reviewed the Draft EIS on the Rangely CO_2 Pipeline and have the following comments:

19.13 There are numerous active and inactive slumps, slump-earth flows, and debris laden earth flows along the proposed pipeline route. Earlier this year, slumps destroyed Highway 191 near T.13 N., R.105 W., sections 11 and 14 (Little Mountain area). The pipeline crosses that area and could be adversely affected itself, or excavation for the pipeline could affect the stability of the slope that the road is sitting on.

19.14 There are active flows and slumps immediately adjacent to the pipeline route on the southeastern slope of Miller Mountain. The Wasatch Formation is steeply dipping to the west-southwest in this area, and is capped by the flat-lying Bishop Conglomerate. Water is captured by the conglomerate and channelled downslope and down dip in the Wasatch, resulting in numerous flows and slumps. These areas are very unstable and should be avoided.

If these slopes can't be avoided, the pipeline should be kept as far from the highway in this area as possible. Highway 191 at Miller Mountain was closed for a week this summer due to a large slump. Construction activity near the highway could cause more damage to it.

Information on these landslide-prone areas is available from our office.

19.1 Please see response to comment 1.1.

19.2 Thank you for the information, a copy of your letter has been forwarded to the applicants.

19.3 Thank you for this information. Please see the Errata Summary for changes to pages 63 and 84 of the draft EIS. Also, the reference on page 147 has been deleted.

19.4 Thank you for the information. The applicants have not decided on a source of water at this time. The 10 acre-foot figure is only a rough estimate. The applicants' intend to follow all federal, state, and county permit requirements in obtaining and disposing of test water. See Errata Summary for changes to page 23 of the draft EIS.

19.5 See Errata Summary for change to page 42 of the draft EIS.

19.6 The correct average annual discharge of the Green River at Green River, Utah is 4,563,000 acre-feet. See Errata Summary for change to page 76 of the draft EIS.

19.7 Thank you for your concerns and comments. Few details were given to the recreation resource impact analysis because of the lack of significant impacts: (1) construction would last less than 1 year, peaking for 3 months (July, August, September) in 1985; (2) the pipeline would be constructed in three spreads; therefore, the workforce and associated population would be spread throughout the region; (3) as stated on page 36 of the draft EIS, population increases from construction in 1985 are expected to increase from 2 percent in Green River, Vernal, and Rangely to less than 1 percent in Craig; (4) an anticipated 50 percent of the workforce would be hired locally, so these people are already included in the demand for recreation resources, to varying degrees; and (5) pipeline operation would require only 10 to 20 workers which would not cause any significant impacts to the recreation resource. Because construction would last less than one recreation season, specific mitigation measures for the recreation resource would not be necessary. As well, the applicants would be required to apply measures contained in Appendix 1 of this EIS. The measures for stabilization and reclamation identified in Appendix 1 would also be applied in the four sections of concern, so no additional mitigation for visual resources in these areas appear to be necessary.

19.8 Thank you for this information. Please see revised Appendix 1 in this EIS.

19.9 Please see response to comment 19.7.

19.10 Map A1-3 has been corrected to reflect pronghorn summer ranges in the West Green River antelope herd unit. The map has been reprinted as a blue line. Limited copies may be obtained from the BLM Rock Springs, Vernal, and Craig District Offices and the Kemmerer, Big Sandy/Salt Wells, and Meeker Resource Area Offices. The additional information will not change the impact analysis.

19.11-
19.12 Please see revised Appendix 1 in this EIS for changes.

19.13 The Little Mountain slide area was identified on Map A4-3 of the Chevron Phosphate EIS. The pipeline would not cross close enough to the area to cause any impacts and should not be affected by slumping from the slide area.

19.14 The slide area on Miller Mountain is recent. The present pipeline alignment would not cross close enough to the area to cause any impacts.

Comment Letter 20

20

JOHN R. SWANSON
P. O. Box 922
Berkeley, CA 94701

October 25, 1984.

Bureau of Land Management.
Division of E S S Services
555 Zang Street
Denver, Colorado 80228.

Dear Sirs;

Please accept my comments, as follows, concerning—
Proposed Rangely CO_2 Pipeline Draft Environmental Impact Statement.

I am well acquainted with the current route – as now proposed – of such Pipeline; having first visited such several areas nearly fifty years ago and regard this route as containing, today, outstanding Wilderness, scenic, wild life, fish, historic and cultural resources of certain National significance. Areas that fully benefit Man, and all Life, on this endangered planet.

The compressor station in Wyoming is to have a negative impact on the land, air and water, plus, citizens of Lincoln County, Wyoming.

With the Pipe line destroying very valuable wild life habitat in the States involved. With at least one sighting of the nearly extinct black-footed ferret recorded recently in the pipe line area of Wyoming.

Also, this pipe line to impact the specific area of the proposed Brigham Young National Park to be located in North east Utah, and to include portions of Wasatch and Ashley National Forests; also, other Public Lands.

The Brigham Young National Park – as now proposed – to include a total of some 1895,000 acres, with a Wilderness of about 1,235,000 acres.

With pipeline to eliminate prospects of creating a Dinosaur National Park in border area of Utah-Colorado. And to include 535,000 acres, at least, with a Wilderness of about 505,000 acres.

In fact, this project will not only damage unique Wilderness, wild life, historic and scenic-park resources in Rio Blanco county, Colorado, but will destroy such resources along its entire route in the States of Wyoming, Utah and Colorado.

I then to continue to Oppose such Pipe line!

For when we save our Natural Lands and Waters, including Wilderness and Wild life-Biological Resources; we save America!

Sincerely,

D. R. Swanson

20.1 Thank you for your comments and concerns about the proposed project. Your comments will be considered in the decision-making process; however, BLM personnel believe that the mitigation measures identified in Appendix 1 of this EIS (Appendix 3 of the draft EIS) provide adequate protection to the resources of concern. Some disturbance would occur, but only for the short term.

United States
Department of
Agriculture

Forest
Service

11177 W. 8th Avenue
Box 25127
Lakewood, CO 80225

Reply to: 1950

Date: OCT 30 1984

11/1/84

ROUTING	INITIAL	
SO		MB
ASD		Lands
SASD		OPNS
EEO		ADMIN
OPA		CF
		LEAD RESP

Mr. Hillary A. Oden, State Director
Wyoming State Office
Bureau of Land Management
Box 1828
Cheyenne, WY 82003

Dear Mr. Oden:

Thank you for the opportunity to review the draft Environmental Statement for the proposed Rangely Carbon Dioxide Pipeline. We have no comments.

Sincerely,

for James R. Torrence

JAMES F. TORRENCE
Regional Forester

cc: EC, P&L, WO
R&L

MS:ms/mk

FS-6200-28(7-82)

Thank you for taking the time to review the draft EIS.

DEPARTMENT OF THE ARMY
OMAHA DISTRICT CORPS OF ENGINEERS
6014 U.S. POST OFFICE AND COURTHOUSE
OMAHA, NEBRASKA 68102

REPLY TO ATTENTION OF

November 1, 1984

Planning Division

Ms. Janis L. VanWyhe, Project Leader
Bureau of Land Management
Division of EIS Services
555 Zang Street, First Floor East
Denver, Colorado 80228

Dear Ms. VanWyhe:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Rangely Carbon Dioxide Pipeline and have the following comments.

The proposed construction crosses the flood plains of numerous small drainageways and streams. However, flood related problems should not exist with underground pipelines if the lines are buried far enough below the beds of drainageways and streams to prevent exposure caused by streambed erosion during periods of high floodflows. If any above-ground construction such as for pumping stations is subject to flood damage, it should be either above or flood proofed to at least the 100-year flood.

22.1

22.2 It appears that the level of effort regarding the presentation of cultural resources was not as thorough as some of the other subjects. National Register properties and sites considered important to the respective states should be discussed and their general locations indicated on maps, in addition to the information presented in the "Affected Environment" sections. Paragraph 1 of the "Required Federal Measures (Appendix 3)" should also include evaluation of previously identified sites that will be directly impacted by the project.

22.3 If the proposed construction involves placing fill material (permanent or temporary) into a waterway, natural lake or wetland, a permit pursuant to Section 404 of the Clean Water Act will be required. Due to a recent change in our regulations we are required to look at each individual crossing to determine permit requirements. When project plans are complete, they should be sent to the Omaha District, Corps of Engineers, Permits Branch, P.O. Box 5, Omaha, Nebraska 68101 for detailed review of permit requirements. The plans should include a list of waterways to be crosses and their locations, the pipeline route, and a description of the work to be accomplished at the crossings.

We appreciate the opportunity to comment on the DEIS.

Sincerely,

Richard D. Cortright
Chief, Environmental Analysis Branch
Planning Division

22.1 No aboveground facilities would be located within significant 100-year floodplains.

22.2 The historical and cultural properties that could be affected by the project were discussed. It was not felt necessary to discuss all properties within the vicinity, because the procedures identified in Appendix 1 of this EIS (Appendix 3 of the draft) will ensure proper protection of any cultural or historical properties that may be disturbed by the project. Also, please see comment letters 2 and 3 from the Wyoming Recreation Commission and the Advisory Council on Historic Preservation.

22.3 Thank you for the additional information; BLM has forwarded your letter to the applicants.

Colorado Interstate Gas Company
P.O. BOX 1087 • COLO. SPGS., CO 80944 • (303) 473-2300

September 19, 1984

U. S. Department of the Interior
Bureau of Land Management
P.O. Box 1170
Rock Springs, Wyoming 82902

Attention: Mr. Clinton E. Hansen
Area Manager
Big Sandy Resource Area

Re: RS-Wyoming Main Line
W-040954
Rangely CO_2 Line

Dear Mr. Hansen:

23.1 Regarding Chevron's plan to construct a sixteen-inch Carbon Dioxide pipeline to Rangely, Colorado, Colorado Interstate Gas Company (CIG) has no objection to such construction so long as Chevron contacts our District Superintendent at Table Rock Village, Star Route 2 East, Rock Springs, Wyoming 82901 at least seven days prior to constructing across our existing 22" natural gas pipeline in Section 15, Township 18 North, Range 106 West. Also, the Carbon Dioxide pipeline should be laid a minimum of two feet under said 22" natural gas pipeline.

23.2 These comments assume that there will be no encroachments on CIG's rights of way in Section 24, Township 18 North, Range 106 West east of Mountain Fuel Supply Company's Kanda and Nightingale Compressor Stations.

If you have any questions in this regard, please call me at (303) 473-2300, Ext. 455.

Yours truly,

Floyd C. Robertson

Floyd C. Robertson
Senior Land Agent

FCR:gw

xc: Chevron USA, Inc.
700 South Colorado Boulevard
Box 599
Denver, Colorado 80201
Attention: Dan L. Fager

23.1 We have sent all comment letters to Chevron and Exxon and expect them to coordinate with all companies having facilities that would be crossed or paralleled by the project.

23.2 Thank you for the information which has been passed on to the applicants. Your comment assumptions are essentially correct. When the right-of-way grant is issued, a list will be provided of all existing rights-of-way that will be crossed. The applicants will be required to ensure that the new pipeline will not damage or interfere with any existing pipelines.

W87686 RECEIVED
BIG SANDY/SALT WELLS
RESOURCE AREAS

United States Department of the Interior NOV 05 '84

BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11568
SALT LAKE CITY, UTAH 84147

BSRA	SWRA
AM	AM
LANDS	LANDS
MIN	MIN
REC	REC
RANGE	RANGE
WL	WL
COMP	COMP
ADMIN	

IN REPLY
REFER TO: UC-457
520.

NOV 2 1984

Memorandum

To: Mr. Clinton Hansen, Area Manager, Big Sandy Resource Area,
Box 1190, Rock Springs, Wyoming 82902
Attention: Mike Morris

From: Regional Supervisor of Water and Land
Bureau of Reclamation

Subject: Rangely Carbon Dioxide Pipeline, Seedskadee Project

24.1 The alinement of the above-referenced pipeline has been reviewed and it appears that several sections of Reclamation withdrawn lands will be crossed. Of notable importance in the crossing are Section 18, Township 20 North, Range 109 West, and Section 34, Township 19 North, Range 108 West, which contain gravel pits.

Our recommendation is that the right-of-way to be issued by your office under authority of the 1920 Mineral Leasing Act contain stipulations that there be no excavation of materials from these sites due to the existence of the pipeline. Also, since a valuable resource would be rendered unminable we concur in your plan to have the energy companies involved purchase the gravel that would have to be left in place. The revenue should be distributed under the appropriate laws.

There were no other notable items.

Once the right-of-way is issued a copy of the document should be provided for our records.

Deborah M Finke

24.1 Thank you for your comment. The Code of Federal Regulations, Part 2881.1-1(a), does not allow holders of rights-of-way to use other public land resources in or along the right-of-way corridor including gravel materials. If the applicants need gravel, they will be required to use an authorized gravel pit. BLM has no plans to require the applicants to purchase the gravel left in place.

Casper Division
Production United States

Marathon Oil Company

P.O. Box 120
Casper, Wyoming 82602
Telephone 307/235-2511

November 5, 1984

Ms. Janis L. VanWyhe
Project Leader
Division of E.I.S. Services
Bureau of Land Management
First Floor East
555 Zang Street
Denver, Colorado 80228

Dear Ms. VanWyhe:

RE: RANGLEY CO_2 PIPELINE E.I.S.

In light of the Nation's energy requirements and the amount of oil and gas left in place because of recovery techniques, any means of utilizing previously unusable products to aid enhanced recovery is to be applauded. Additionally, the construction and utilization of one right-of-way for portions of two projects shows the thought process at work and not a display of quick shortsighted judgments.

25.1 In regard to the impacts to the specific elements of the project, it is not totally clear as to the mitigating measures to be enforced. In one instance it is mentioned (page 3) that the grazing patterns could be disturbed from the trench being left open for longer than 14 days. This is not general operating procedure. If an impact is insignificant will the mitigating measures be implimented or can they be waived or recinded to save time and money on the project?

25.2 In regard to the visual aspects and the degradation of visual quality, any discussion of impacts to Wilderness Study Areas should be revised in light of the signing of the Wyoming Wilderness Bill. The enacted bill states that there is no intent to create or protect buffer zones around each wilderness area and that all activities which are common outside of wilderness areas can occur right up to the wilderness area boundaries.

25.3 The final question which is raised has to do with the presence of the Blackfooted Ferret as indicated on Map A1-7. How recent are these sightings?

Thank you for the opportunity to comment on this document and let me express my impression of a good document for decision purposes.

Sincerely,

Bradley G. Penn

Bradley G. Penn
Land/Environmental
Coordinator

BGP:dg

25.1 The Summary in this EIS has been revised. (Also see Errata Summary for change to page 52 of the draft EIS.) Mitigation measures will be implemented to ensure that impacts would not be significant.

25.2 BLM does not intend to manage buffers surrounding designated wildernesses. The wilderness narrative was reviewed with your comment in mind, but no changes seemed necessary.

25.3 The ferret sightings were made in 1975 and 1976 and were confirmed by the Fish and Wildlife Service.

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

RECEIVED
NOV 13 1984
FIS OFFICE

IN REPLY REFER TO:
L7617 (RMR-PC)

NOV 6 1984

Memorandum

To: Project Leader, Division of Environmental Impact Statement Services, Bureau of Land Management, Denver, Colorado

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Additional Review of Draft Environmental Impact Statement (DEIS), Rangely Carbon Dioxide Pipeline (DES 84/47)

In addition to our subject memorandum of October 2, we received further comments on the subject DEIS from Dinosaur National Monument. A copy of those comments is attached. We would appreciate it if they could be considered as part of the document's review.

Richard A. Strait

Enclosure

United States Department of the Interior
NATIONAL PARK SERVICE
Dinosaur National Monument
P.O. Box 210
Dinosaur, Colorado 81610

Rocky Mountain Regional Office
OCT 17 '84

IN REPLY REFER TO:

L7619
xL7023 CO2 Pipeline

October 15, 1984

Memorandum

To: Regional Director, Rocky Mountain Region
Attn: Associate Regional Director, Planning and Resource Preservation

From: Superintendent, Dinosaur National Monument

Subject: Rangely Carbon Dioxide Pipeline, DES 84/47

We have reviewed the subject document and have only a few comments.

26.1 We still have some concerns about impacts to the endangered Colorado River fishes, especially near the lower Green River crossing by the proposed route. Consultation with the U.S. Fish and Wildlife Service may identify times or methods of construction which could preclude impacts in the nursery area.

26.2 The DEIS notes, on p. 83, that construction workers could displace park visitors/campers in the Deerlodge Park Campground for 1 to 2 weeks. This type of use of the campground would be discouraged by the National Park Service particularly during periods of high visitor use (May through July).

Based on potential impacts to wildlife, wilderness, and visual resources, Dinosaur National Monument prefers the Proposed Action to the Sand Wash Alternative.

John E. Welch
Acting Superintendent

26.1 Thank you for your comments and concerns. BLM has been in consultation with the Fish and Wildlife Service as indicated in the draft EIS.

26.2 Your concern has been incorporated as a mitigation measure in this EIS. Please see Appendix 1, Required Federal Measures, Miscellaneous section.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
1311 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1197

'84 NOV 16 AM

IN REPLY REFER TO: (ES)

November 7, 1984

'84 NOV 13 AM

MEMORANDUM

TO: Janis L. VanWyhe, Project Leader
Bureau of Land Management (BLM)
Division of EIS Services
Denver, Colorado

FROM: Acting Field Supervisor

SUBJECT: Rangely Carbon Dioxide Pipeline - Review of Draft Environmental Statement, 1792(934)

We have reviewed the subject Draft Environmental Impact Statement (DEIS) and offer the comments listed below.

General Comments

Generally, the Rangely C02 DEIS provides sufficient data to weigh overall project merit and the relative impacts of alternative routes. We believe that required resource measures (Appendix 3) are comprehensive and are basically adequate to protect wildlife resources. Our comments are directed primarily to portions of the document where we believe clarification or expanded discussion is needed. In general, we prefer the proposed route over the Sand Wash alternative which would bisect mule deer winter range.

27.1 The DEIS may not fully characterize the potential for wildlife conflicts along the Rangely C02 pipeline routes. Wildlife map data reveal gaps in information along portions of the proposed pipeline corridor and alternative routes. These data gaps no doubt reflect limited baseline data availability. We recognize that EIS schedules often preclude gathering of sufficient baseline information. Nevertheless, it is misleading (in terms of overall impact potential) not to recognize the probability that conflicts with protected wildlife may occur in those stretches not adequately inventoried. One example of such a probability is found on Map A1-3 on which no raptor nests are indicated south of Rock Springs to the Colorado border along either the proposed route or the Sand Wash alternate route. Although we have no specific data, we believe it is unlikely the entire area is devoid of nesting raptors.

We suggest that you contact the BLM Rock Springs District Office, P.O. Box 1869, Rock Springs, Wyoming 82902 and particularly Larry Apple, Wildlife Biologist for the Salt Wells Resource Area, for additional raptor nest information. This information should be included in the final EIS. If adequate raptor nesting data are still not available, we strongly recommend that additional raptor surveys (with emphasis on raptors of high federal interest) be performed before construction begins. The protection stipulation should be applied to any additional nests that are discovered.

27.1 cont.

If raptor nests were not shown on the maps because a determination has been made that they would not be affected because of distance from right-of-way, shielding by topographic features, or other reasons, a statement to that effect would help clarify the matter.

27.2 The DEIS provides some information relating to each of the listed species, but mentions only one of the candidate plants. While candidate species receive no legal protection under the Endangered Species Act, we believe it is in the spirit of the Act to address them in the planning document and avoid them during construction, where possible. Additional surveys for candidate plants may be appropriate.

27.3 Page 104 of the DEIS provides one paragraph relating to the need for "...appropriate consultation...", but does not discuss BLM's responsibility to prepare a biological assessment for the listed threatened and endangered species. We believe the Final Environmental Statement should provide more detail relating to the Section 7 process including actions that have been taken to satisfy this requirement.

27.4 The determination of 'may affect' or 'no effect' for the listed species could be more clearly stated. For example, page 2 of the DEIS states that Colorado squawfish "...would not be affected"; page 42 states that losses of Colorado squawfish "...are possible, but not probable"; page 91 states "Neither...action... would significantly affect...Colorado squawfish and humpback chub"; and page 92 states 'no impact.' Collectively, these statements convey an impression of "no effect," which is inconsistent with the "may effect" determination contained in the biological assessment. We believe at least the summary of the DEIS and the section on threatened and endangered species for each alternative should clearly state the determination of 'may affect' or 'no effect' for each of the listed species and be consistent with findings of the biological assessment.

27.5 We believe that an additional basic conservation measure is needed that would require immediate notification of the appropriate state wildlife agency and the Fish and Wildlife Service (FWS) if unforeseen conflicts with any protected wildlife are encountered by Chevron project personnel. In some cases, it is not possible to determine positively if there will or will not be a wildlife conflict until the exact right-of-way is staked out

27.5 cont. on the ground. Therefore, it is important that the right-of-way permit contain provisions for coordination with appropriate state wildlife agencies and the FWS prior to issuance of a notice to proceed.

27.6 We believe the DEIS should discuss bald eagle habitat and stipulate what measures will be incorporated to avoid potential impact associated with the activity (e.g. no loss of riparian trees, planting of riparian trees, avoidance of known roosting or hunting sites), for the proposed as well as the Sand Wash alternative.

Specific Comments

27.7 Page 2, Wildlife - State 'no affect' or 'may effect' for each of the listed threatened or endangered species.

27.8 Page 3, paragraph 2 - How was it determined that no adverse effects would occur to threatened, endangered, or sensitive plants?

27.9 Page 91, wildlife - Regarding endangered species, the word 'significant' has no application under the Endangered Species Act. Any degree of 'may affect' requires formal consultation. State whether the other threatened and endangered species will be affected by the alternatives.

27.10 Page 92, wildlife - This table should include the other listed, threatened and endangered species provided by FWS memorandum of April 6, 1984.

27.11 Page 104, wildlife, a, Paragraph 1 - "Construction of the pipeline crossing of the Green River...at MP 38 will be completed after March 1 or before September 30."

In recent years an early spawning run of Kokanee salmon has developed in the Green River. To protect this early Kokanee run, construction should end by September 15 rather than September 30. The other restrictions for MP 38 should remain as stated in the DEIS.

27.12 Page 104, wildlife, a, paragraph 2 - According to our information, there are no brown trout at Green River crossing MP 143; however, Colorado squawfish may occur in the area. We, therefore, recommend that no construction at this river crossing occur from August 15 to September 15. Should the Sand Wash alternative be selected, no construction across the Yampa River should occur from June 15 to August 30.

27.13 Page 104, wildlife, b - Inventories should be completed as a process of preparing the biological assessment. On some occasions specific inventories will be recommended in the Biological Opinion. The word 'mitigation' has no application under the Endangered Species Act. Reasonable and prudent alternatives and conservation measures may sometimes be recommended to avoid impact to listed threatened or endangered species. For additional clarification see FWS April 6, 1984 memorandum (Appendix 6.)

27.14 We note on page 104 that prairie dog colonies on the project routes will be surveyed for the presence of black-footed ferrets and breeding/nesting of burrowing owls. It should be pointed out that the timing of these surveys should be closely coordinated with the FWS and Wyoming Game and Fish Department (WG&FD), as there is only a short period when both species can be surveyed simultaneously. If winter ferret surveys will be required, additional summer surveys would be required to document nesting burrowing owls. Ferret surveys should follow procedures as outlined in the most current FWS ferret search guidelines. Also, the results of these surveys should be submitted to and cleared by FWS-Endangered Species before construction disturbs any prairie dog colonies whether or not ferrets are found.

27.15 Map A1-8 - We are providing the following probable sightings of black-footed ferrets that have been reported since 1970 near the proposed pipeline.

Date Observed	Location
1976	Rio Blanco County, T2N, R103W. Six miles west of Rangely, Colorado.
1977	Moffat County, T3N, R102W. Two miles east of Massadona, Colorado.
1982	Moffat County, along Hwy. 40, 1-2 miles east of Jct. of south entrance road leading to Dinosaur National Monument (Echo Park).
1983	Moffat County, along Hwy. 40, 10 miles west of Elk Springs.

27.16 Page 104 also cites the Raptor Research Foundation publication for constructing raptor safe powerlines. However, the citation does not appear in the references cited section. The correct citation is:

27.16 cont.

Oldenforff, Richard R., A.D. Miller, and R.N. Lehman. 1981. Suggested Practices for Raptor Proection on Power Lines. Raptor Research Report No. 4. Raptor Research Foundation, Inc.

This publication is available from:

Dr. Gary E. Duke
Raptor Research Foundation
Department of Veterinary Biology
University of Minnesota
St. Paul, Minnesota 55101

27.17 Some features of seasonal distribution are missing from Map A1-3. No summer and winter ranges are shown for the West Green River Antelope Herd Unit.

The opportunity to comment is appreciated.

cc: RD (HR), FWS, Denver, Colorado
SE, FWS, Salt Lake City, Utah
ES, FWS, Cheyenne, Wyoming
Director, Utah DWR, Salt Lake City, Utah
Director, Wyoming Game & Fish, Cheyenne, Wyoming
Director, Colorado DOW, Denver, Colorado
Colorado DOW, Grand Junction, Colorado

27.1 There was an oversight in the data gathering. Please see Table 1 in the Summary and the Errata Summary of this EIS for raptor inventory data. A limited number of blue-line maps indicating raptor locations may be obtained from the BLM offices identified in the response to comment 19.10.

27.2 Additional surveys are not anticipated. See Errata Summary for changes to page 44 of the draft EIS.

27.3 The Biological Assessment has been prepared and submitted to the Fish and Wildlife Service. The Fish and Wildlife Service has formally requested an extension in order to complete its Biological Opinion. The Opinion could not be incorporated as part of this EIS as originally planned; however, it will be included as part of the final decision-making process. (Also please see Appendix 6 of the draft EIS.)

27.4 See revised Comparative Analysis table in the Summary of this EIS and the Errata Summary for changes to page 91 of the draft EIS.

27.5 Please see Required Federal Measures, revised Wildlife section, in Appendix 1 of this EIS.

27.6 See page 43, paragraph 1, of the draft EIS for a discussion of bald eagles and their habitats and the rationale for no adverse impacts to this species.

27.7 See revised Comparative Analysis table in the Summary of this EIS.

27.8 The Fish and Wildlife Service did not identify any threatened or endangered plant species in its April 6, 1984 letter (Appendix 6 of the draft EIS); therefore, it was presumed that none existed. Pages 44 and 72 of the draft EIS identified sensitive plant species near the project area. Please see Errata Summary addition to page 44 of the draft EIS where candidate species have now been identified. Also, the statement in the Summary has been deleted.

27.9 See revised Comparative Analysis table in the Summary of this EIS and the Errata Summary for changes to page 91 of the draft EIS.

27.10 See revised Comparative Analysis table in the Summary of this EIS for additions.

27.11 See Required Federal Measures, revised Wildlife section, in Appendix 1 of this EIS.

27.12 Please see Appendix 1, Required Federal Measures, revised Wildlife section, of this EIS (formerly Appendix 3 in the draft) for the addition of your recommended mitigation measure.

27.13 Thank you for your information.

27.14 Thank you for this information. Only survey methods approved by the Fish and Wildlife Service will be conducted on the pipeline.

27.15 Thank you for this information. Map A1-8 has been changed to reflect this information. The map has been reprinted as a blue-line and may be obtained by interested parties at the BLM offices identified in the response to comment 19.10.

27.16 Thank you for this comment. Please see the Errata Summary for addition to page 143 of the draft EIS. Also, the citation on page 104 has been changed to reflect your comment.

27.17 Thank you for this information; the map has been changed and reprinted as a blue-line, which can be obtained from the BLM offices identified in the response to comment 19.10.

Appendix

APPENDIX 1
REQUIRED FEDERAL MEASURES, RECLAMATION PROCEDURES,
COMPANY STANDARD CONSTRUCTION AND OPERATION PROCEDURES, AND
OTHER MEASURES DESIGNED TO REDUCE ENVIRONMENTAL IMPACTS

	Page
Required Federal Measures	154
Wildlife	154
Water Resources	156
Soils and Vegetation	156
Agriculture	157
Visual Resources	157
Cultural Resources	157
Paleontology	158
Transportation Networks	159
Land Uses	160
Waste Disposal	161
Air Quality	161
Miscellaneous	161
Specific Federal Measures	162
U.S. Department of Army, Corps of Engineers	162
U.S. Environmental Protection Agency	163
Required Reclamation and Erosion Control Procedures	164
Right-of-Way and Site Clearing	165
Trenching and Preservation of Topsoil	166
Backfilling and Grading	167
Land Preparation for Seeding and Cultivation	168
Revegetation (Reseeding and Planting)	169
Maintenance and Monitoring	170
Use of Biochemicals	170
Company Standard Construction and Operation Procedures Designed to Reduce Environmental Impacts	170
Construction Timing	170
Construction Procedures	171
Operation and Maintenance	172
Abandonment	172
Special Federal Mitigation Measures	172
State of Wyoming, Office of Industrial Siting Administration, Permit Conditions to Mitigate Environmental and Socioeconomic Impacts of the Chevron Phosphate Project	174

REQUIRED FEDERAL MEASURES

As a condition for granting the various rights-of-way and permits, the authorizing agencies require that certain terms and conditions be met. The general federal resource measures are presented here. As project plans are finalized and before authorization is given, specific requirements will be added by the various authorizing agencies.

1. Wildlife

   a. Construction of the pipeline crossing of the Green River at MP 38 will be completed after March 1 or before September 15. This is due to the fall spawning of the brown trout and the migration of the Kokanee salmon. For the protection of spawning rainbow trout, the construction of the pipeline crossing will not be conducted from April 1 to June 30. The allowable periods at this crossing are the months of March, July, August, and September. Any exceptions must be approved by the authorized officer in consultation with the State Game and Fish Department.

      No construction activity will be authorized at the Green River crossing at Proposed Action, Jensen crossing, MP 143, T. 1 N., R. 25 E., between August 15 and September 15 because of the possible presence of Colorado squawfish. If the Sand Wash Alternative was selected, no construction across the Yampa River should occur from June 15 to August 30.

   b. The Company will allocate sufficient funds and time in advance of construction of any element of the project and its related facilities in order to perform Fish and Wildlife Service-approved inventories on any listed threatened and endangered species determined by the Fish and Wildlife Biological Opinion. If it is determined that listed species or their habitats may be present and could be affected by the proposal, appropriate consultation with the Fish and Wildlife Service will be conducted by the federal authorizing agency. No activities will be authorized until consultation is complete as specified by Section 7(c) of the Endangered Species Act. The Biological Opinion issued by the Fish and Wildlife Service as a result of the consultation process will detail the specific mitigation measures to be carried out by the Company.

   c. The Company shall comply with existing county, state, and federal laws involving the protection and preservation of feral horses, feral burros, and raptors, and game and nongame wildlife species.

   d. In order to protect big game winter range and prevent harrassment to wildlife during the critical winter and calving/fawning periods, construction activity will be allowed only from April 1 to December 15 on winter ranges and from July 1 to

May 1 on calving/fawning habitat. This limitation does not apply to maintenance and operation of this right-of-way. Any exceptions to the requirement must be obtained in writing from the authorized officer.

e. No construction or disturbance will be permitted within the prescribed distance during the listed breeding/nesting periods of the following raptors until a clearance survey has been completed and approved by the authorized officer after consultation with the Fish and Wildlife Service and the appropriate state wildlife agency. If any of these species are found, the Bureau of Land Management (BLM), in consultation with the state wildlife agency and the Fish and Wildlife Service (FWS), and in accordance with existing state and federal regulations, shall determine the appropriate mitigation measure for the particular geographic circumstance to protect the specie(s) found.

f. Pole type designs shall be raptor safe as per Suggested Practices for Raptor Protection on Powerlines (Olendorff and others 1981).

g. No occupancy or other surface disturbance will be allowed within 2 miles from the center of a sage grouse strutting ground (lek) from March 1 through June 30 unless permitted by the authorized officer.

h. Survey the prairie dog colonies on the proposed project route for the presence of black-footed ferrets before completing final engineering plans. If present, consult with the Wyoming Game and Fish Department, Utah Division of Wildlife, or Colorado Division of Wildlife, as appropriate, and Fish and Wildlife Service before proceeding.

i. Pipeline construction in the Rye Grass Draw area should not occur from May 15 to June 15, unless approved by the authorized officer, due to significant elk calving in this area.

Raptor	Distance	Dates
Golden Eagle	1.0 km (0.6 mile)	March 1 - July 15
Red-Tailed Hawk	0.5 km (0.3 mile)	April 1 - July 15
Swainson's Hawk	1.0 km (0.6 mile)	April 1 - July 15
Ferruginous Hawk	2.0 km (1.2 miles)	April 1 - July 15
Prairie Falcon	1.0 km (0.6 mile)	April 1 - July 15
Merlin	1.0 km (0.6 mile)	April 1 - August 15
Harrier	1.0 km (0.6 mile)	April 1 - July 15
Burrowing Owl	1.0 km (0.6 mile)	April 15 - July 15

2. Water Resources

a. When rivers, streams, and washes need to be crossed for access to project facilities, existing roads or bridges will be used unless otherwise designated by the authorized officer. Culverts or bridges will be installed at points where new permanent access roads cross live streams to allow fish unobstructed passage. Where temporary roads cross drainages or dirt fills, culverts will be installed during construction and removed upon completion of the project. Any construction activity in a perennial stream is prohibited unless specifically allowed by the authorized officer. All stream channels and washes will be returned to their natural state.

b. Construction equipment will be refueled and maintained outside of stream channels in areas designated by the authorized officer.

c. In order to minimize damage in the Red Creek Basin Watershed and areas with severe winter conditions, construction will be allowed only from May 15 to November 1. This limitation does not apply to maintenance and operation of this right-of-way. The authorized officer may make further restrictions as necessary to minimize damage or make exceptions as appropriate. Such modification must be obtained in writing from the authorized officer.

3. Soils and Vegetation

a. Existing soils and geological data shall be gathered by the Company and used to achieve maximum revegetation and minimum soil erosion.

b. Where practical, linear facilities will not be located in areas subject to mudflows, landslides, mudslides, avalanches, rock falls, and other types of mass movement. Where avoidance is not practical, the design, based upon detailed field investigations and analyses, will provide measures to prevent the accelerated occurrence of mass movements. A full-scale engineering diagram and staking must be done in these locations. If a slide occurs, the Company will be responsible for any repairs. A plan for restoration of any damage will be presented to the authorized officer for approval.

c. All trees will be cut so that stumps are no more than 6 inches high.

d. Mountain brush and tree-covered areas will be precleared before dozer and maintenance blade work. Preclearing will involve cutting brush and trees and removing them to designated areas.

4. Agriculture

a. To prevent interference with livestock trailing, construction will be coordinated between the grantee, livestock operators, and the authorized officer.

b. Gaps will be left between adjacent lengths of pipe at suitable intervals and at well-defined trails to permit the passage of livestock and vehicles during the time between stringing and other construction operations.

5. Visual Resources

a. All aboveground structures not subject to safety requirements shall be painted by the Company to blend with the natural landscape. The paint used shall be a color or colors which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee (Wyoming 1982). The color(s) selected for this project along with name and Munsell soil color number will be included in the Construction and Operation (CO) Plan.

b. The electric power for the two block valves proposed at the Green River crossing at Browns Park, MP 106.5, will be supplied by one of the two electric power lines which follow the river. The power will be dropped from the power line to the pipeline trench and run through buried electric conduit to the two block valves.

6. Cultural Resources

a. Before construction begins, the Company, in consultation with the authorized officer and the Wyoming, Utah, and Colorado State Historic Preservation Offices, will use available cultural resource data to develop a plan to locate cultural resources that would be directly affected by the proposed project. A Class III (100 percent pedestrian) cultural resource inventory shall be conducted, by a qualified professional archaeologist acceptable to the BLM, on all previously uninventoried lands within the project area. A report of the inventory will be submitted and approved by the BLM with stipulations in compliance with the Archeological Resources Protection Act of 1979, as amended, and Section 106 of the National Historic Preservation Act of 1966. The inventory report will evaluate cultural resources identified during the field inventory for their eligibility for nomination to the National Register of Historic Places and will make recommendations for the management of all eligible or potentially eligible sites."

b. The Company will provide a BLM-approved archaeologist to execute or monitor the survey for cultural resources during construction of all project facilities.

c. If, in its operation, the Company discovers any cultural remains, monuments or sites, or any object of antiquity subject to the Antiquities Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. secs. 431-433), and 43 CFR, Part 3, the Company shall immediately cease activity and report directly to the Area Manager. The BLM shall then take such action as required under the Acts and regulations thereunder. The Company shall follow the mitigation requirements set forth by BLM concerning protection, preservation, or disposition of any sites or material discovered. In cases where salvage excavation is necessary, the cost of such excavations shall be borne by the Company unless otherwise stated.

d. All significant cultural resources identified within the project area will be avoided wherever possible. For significant cultural resources that cannot be avoided, a Memorandum of Agreement with the Advisory Council on Historic Preservation and the Wyoming, Utah, and Colorado State Historic Preservation Offices will be developed that details specific mitigation measures in accordance with 36 CFR 800.

e. The archaeologist will notify the BLM authorized officer a minimum of 3 working days before site monitoring. Construction methods will be used that allow the archaeologist to identify buried cultural resources without endangering the personnel who are monitoring the surface disturbance. If any potentially significant buried resources are identified either along the route or on sites to be used for surface facilities and the archaeologist determines that further operations will seriously affect the cultural resources, work will be suspended and BLM will evaluate the resource and develop additional stipulations as needed. The operator will bear the costs of avoiding or salvaging any cultural resource identified by the archaeologist. A report of all activities of the archaeologist will be submitted to BLM within 30 days after monitoring is completed.

f. The authorized officer(s) may require the Company to relocate the proposed pipeline in order to avoid destruction of archaeological or historical values, or to delay construction until salvage operations are completed. All salvage from federal land shall remain the property of the United States and shall be turned over to the BLM.

7. Paleontology

a. The Company will provide a qualified, professional paleontologist who is approved by the authorized officer. This paleontologist will

intensively survey all sensitive formations identified along the route by the authorized officer. Surveys will be completed on the identified areas before construction begins.

b. The paleontologist will be available, as determined by the authorized officer, during surface disturbance. If, in the opinion of the paleontologist, paleontological values specified by BLM would be disturbed, construction will be halted or diverted until appropriate action can be taken.

c. The Company shall follow the mitigation requirements set forth by BLM concerning protection, preservation, or disposition of any localities or fossil material discovered. In cases where salvage excavation is necessary, the cost of such excavations shall be borne by the Company unless otherwise stated.

d. The paleontologist will notify the BLM authorized officer a minimum of 3 working days before site monitoring. Construction methods will be used that allow the paleontologist to identify buried fossils without endangering the personnel who are monitoring the surface disturbance. If any potentially significant buried resources are identified either along the route or on sites to be used for surface facilities and the paleontologist determines that further operations will seriously affect them, work will be suspended and BLM will evaluate the resource and develop additional stipulations as needed. The operator will bear the costs of avoiding or salvaging any specimen identified by the paleontologist. A report of all activities of the paleontologist will be submitted to BLM within 30 days after monitoring is completed.

e. The authorized officer(s) may require the Company to relocate the proposed pipeline in order to avoid destruction of paleontological values, or to delay construction until salvage operations are completed. All salvage from federal land shall remain the property of the United States and shall be turned over to the BLM.

8. Transportation Networks

a. The pipeline and power line rights-of-way will be used as access roads only when necessary during the construction period and only during emergencies after completion. Uses will be only as approved by the authorized officer.

b. The Company will control off-road vehicle use on the rights-of-way. Specified control could include physical barriers, replanting of trees, or other reasonable means of off-road vehicle control.

c. Gates or cattle guards on established roads on public land will not be locked or closed by the Company unless the gates or cattle guards were originally locked or closed.

d. Construction in Jesse Ewing Canyon, which would interfere with the vehicle use on the existing road, will not occur (1) during the Memorial Day weekend and the opening weekend of fishing season if different from Memorial Day, (2) during the Labor Day weekend, nor (3) during the first 2 weeks of big game hunting season.

e. The Company will comply with existing federal, state, county, and private requirements developed for the protection of all existing facilities. Load limit restrictions will vary from state to state, with each type of roadway and the time of the year. This could limit the hauling of heavy loads on specific roadways during specified times.

f. Vehicle access up and down Jesse Ewing Canyon will be allowed periodically throughout each day and at the end of each shift. In case of an emergency, the contractor will allow emergency vehicles access through the Canyon as required. This will assure that residents of Browns Park will not be blocked either in or out of the Browns Park area for extended periods.

A schedule of times when the road would be open and closed will be posted in Dutch John and the Browns Park. A copy will also be provided to the BLM Vernal District Office.

Before beginning construction, the applicants will hold a town meeting at a place agreeable to the Daggett County Commission. The applicants will explain to the residents of Daggett County how construction will be carried out, and what will be done to minimize the impact of construction on the residents of Browns Park and Dutch John.

9. Land Uses

a. Disturbances of improvements such as fences, roads, and watering facilities during the construction and maintenance of the rights-of-way must be kept to an absolute minimum. If damage to improvements should occur, immediate action will be taken to restore such improvements to at least their former condition. Functional use of these improvements must be maintained at all times.

b. If a natural barrier used for livestock control is broken during construction, the Company will adequately fence the area to prevent drift of livestock. In pronghorn ranges, the fence may have to be constructed so that

animals may pass. Fence specifications will be determined on a case-by-case basis.

c. All fencing constructed by the Company will meet BLM requirements except where total exclusion is required.

10. Waste Disposal

a. Construction sites shall be maintained in a sanitary condition at all times; waste at those sites shall be disposed of promptly at the nearest sanitary landfill. "Waste" means all discarded matter, including human waste, trash, garbage, refuse, oil drums, petroleum products, construction materials, ashes, and equipment. No burying of debris or waste materials will be allowed, except as specifically authorized by the authorized officer.

b. A litter policing policy shall be developed, approved by the authorized officer, and followed on all roads and sites associated with the project.

11. Air Quality

Major access roads will be watered or other approved dust abatement procedures will be used to prevent severe wind erosion and loss of soil materials during construction as may be required by the authorizing officer.

12. Miscellaneous

a. When all development and rehabilitation have been completed, a joint compliance check of the right-of-way will be made by the Company and the authorized officer or designated representative to determine compliance with the terms and conditions of the grant. The Company will perform, at its own expense, any required modifications or additional reclamation work for compliance with the terms of the grant.

b. An "as built" survey map will be submitted to the authorized officer(s) within 60 days after construction is completed.

c. Whenever the authorized officer identifies a weed control problem, the Company will be responsible for weed control on disturbed areas within the exterior limits of the grant. The Company is responsible for consultation with local county weed and pest supervisors for the most appropriate weed control methods. Pesticides shall be used in accordance with written instructions from the authorized officer. These instructions should be obtained prior to December 1 if use is planned for the next year. Emergency use may occur with approval from the authorized officer. Pesticides shall not be permanently stored on public lands authorized for use under this grant.

d. The Company will prepare a transportation plan subject to the approval of the authorized officer. The plan will consider items such as buses for use by the workers in commuting to and from work.

e. The Company and any contractors will require their employees to avoid camping on the public lands in the Salt Wells and Big Sandy Resource Areas which are designated as closed to camping in the BLM planning documents. Information on locations of closed areas can be obtained at the BLM Resource Area offices in Rock Springs.

SPECIFIC FEDERAL MEASURES

U.S. Department of Army, Corps of Engineers

The Army Corps of Engineers has prescribed management practices that should be followed, to the maximum extent practical, for discharges covered by the Nationwide 404 Permit (items 1 through 8). Additionally, certain conditions (33 CFR 323.4-3(b)) must be met under the Nationwide Permit authority (items 9 through 16). For further detail, please refer to the Army Corps of Engineers Permit Program "A Guide for Applicants," dated November 1, 1977.

1. Discharges of dredged or fill material into United States waters should be avoided or minimized through the use of other practical alternatives.

2. Discharges in spawning areas during spawning seasons should be avoided.

3. Discharges snould not restrict or impede the movement of aquatic species indigenous to the waters, impede the passage of normal or expected high flows, or cause the relocation of the waters (unless the primary purpose of the fill is to impound water).

4. If the discharge creates an impoundment water, adverse impacts on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow should be minimized.

5. Discharges in wetlands areas should be avoided.

6. Heavy equipment used in wetlands should be placed on mats.

7. Discharges into breeding and nesting areas for migratory waterfowl should be avoided.

8. All temporary fills should be removed in their entirety.

9. There cannot be any change in preconstruction bottom contours. (Excess material must be removed to an upland disposal area.)

10. The discharge cannot occur near a public water supply intake structure.

11. The discharge cannot destroy a threatened or endangered species as identified under the Endangered Species Act nor endanger the critical habitat of such species.

12. The discharge cannot disrupt the movement of those aquatic species indigenous to the water body.

13. The discharge must consist of suitable material that is free of toxic pollutants in other than trace quantities.

14. The fill created by a discharge must be properly maintained to prevent erosion and other nonpoint sources of pollution.

15. The discharge must not occur in a component of the national wild and scenic river system or in a component of a state wild and scenic river system.

16. No access roads, fills, dikes, or other structures can be constructed below the ordinary high water of the streams specified under the Nationwide Permit. These structures would require separate Section 404 permits.

U.S. Environmental Protection Agency

Since construction of the pipeline will involve river crossings, a Nationwide Section 404 Permit will be required. Generally river crossings are covered under the permit, although specific permits (Individual 404 and Section 10 permits) will be required for important crossings. An individual permit will be required if any wetlands are to be filled. The U.S. Environmental Protection Agency reviews the applications for 404 permits administered by the Army Corps of Engineers and provides recommendations for action on the permit including mitigation measures. For this project, the U.S. Environmental Protection Agency will likely recommend the following measures for the Green River crossings:

1. Dredged materials should be stored away from the flowing waters

2. Disturbed wetland or riverine areas should be revegetated with native trees, shrubs, and grasses where applicable;

3. The permit should consider appropriate times for river disturbance which do not interrupt spawning cycles of various fish species; this may involve identifying the "gaps" or "windows" for construction between different spawning seasons.

Additional mitigation measures will be considered for the following areas after more details are received:

4. Provisions for backfillings;

5. Lengths of riprapping involved; perhaps some limitations to minimize use of riprap.

REQUIRED RECLAMATION AND EROSION CONTROL PROCEDURES

The following procedures will be required for use on federal land. The Company has stated it would follow or has agreed to follow these procedures on all federal, state, and private lands as appropriate and agreed to by the landowner. The procedures outlined in this appendix will be incorporated as stipulations in any federal right-of-way grant that may be issued, and will be used by the Company to develop its CO Plan. These procedures will be applied during all phases of the project (construction, operation, and abandonment).

1. When operating on Utah state land, the Company will prepare and follow appropriate plans, including applicable measures and procedures, to accomplish and ensure successful reclamation of state land affected by project action, as required by the Utah State Department of Natural Resources, Division of Oil, Gas, and Mining (State of Utah 1953).

2. When operating on Wyoming state land, the Company will prepare and follow appropriate erosion control and reclamation plans including applicable measures and procedures to accomplish and ensure successful reclamation of state land affected by project action as required by the Wyoming State Land Board.

3. When operating on Colorado state land, the Company will prepare and follow appropriate plans, including applicable measures and procedures, to accomplish and ensure successful reclamation of state land affected by project action, as required by the Colorado State Department of Natural Resources guidelines.

4. The Company will comply with the erosion control and reclamation programs it has developed and will follow through on its commitment to "comply with appropriate regulations and required plans and stipulations to protect and restore any land disturbed by project construction and operation to a stable, productive, and aesthetically acceptable condition."

5. The Company will develop a detailed, site-specific reclamation plan as part of its CO Plan. Because the proposed rights-of-way are composed of many types of terrain, soils, vegetation, land uses, and climatic conditions, the detailed plan will include sets of techniques and measures tailored to each condition encountered. Local expertise and locally effective reclamation methods will be followed when the specific procedures for the detailed reclamation plan are developed. The erosion control,

revegetation, and restoration guidelines and CO plan will be implemented under the direction of the authorized officer.

6. Details on applicable techniques of erosion control and reclamation for technical assistance to private landowners will be obtained as required by the private landowner from local Soil Conservation Service Districts. Technical assistance and approval of written plans for federal lands will be obtained from the BLM before any construction begins.

7. During construction of the project, an on-site reclamation specialist will be employed by the Company to provide: (a) liaison with private landowners, federal agency officials, and local governments; (b) expertise for directing applicable restoration procedures when special conditions are encountered, without causing construction delays; and (c) favorable public relations.

8. General erosion control and restoration measures have been developed for the following areas:

   - Right-of-way and Site Clearing
   - Trenching and Preservation of Topsoil
   - Backfilling and Grading
   - Land Preparation for Seeding and Cultivation
   - Revegetation
   - Maintenance and Monitoring
   - Use of Biochemicals

Right-of-way and Site Clearing

Emphasis will be placed on protecting existing vegetation and minimizing disturbance of the existing environment.

- Land grading will be done only on the area required for construction.

- Sidehill cuts that are approved in the CO plan will be kept to a minimum to ensure resource protection and a safe and stable plane for efficient equipment use. The authorizing agency will provide assistance as necessary.

- Existing ground cover such as grasses, leaves, roots, brush, and tree trimmings will be cleared and piled only to the extent necessary. Slash will be piled and later used in restoration operations, spread over the right-of-way, or disposed of at the discretion of the authorized officer.

- Trees and shrubs that are not to be cleared from the right-of-way will be protected from damage during construction.

- Where the right-of-way crosses streams and other water bodies, the banks will be stabilized to prevent erosion. Construction techniques will be designed to minimize damage to shorelines, recreational areas, and fish and wildlife habitat.

- A buffer strip of terrestrial vegetation above the high water line will be left

between work staging areas adjacent to the stream and the stream itself.

- Care will be taken to avoid pollution in all areas including streams and other water bodies and in their immediate drainage areas. Spills will be cleaned up as required by the authorized officer or landowner.

- Design and construction of all temporary roads will be based on an approved transportation plan and will ensure proper drainage, minimize soil erosion, and preserve topsoil. After abandonment, these roads will be closed and the areas restored without unnecessary delay or maintained at the discretion of the landowners. Restoration, including redistribution of topsoil, will be to the satisfaction of the landowner and/or regulatory officials.

- During wet and muddy weather conditions, as determined by the on-site reclamation specialist, the authorized officer will issue stop and start orders to prevent rutting or excessive tracking of soil and deterioration of vegetation in the right-of-way area.

- During construction activities near streams or lakes, sedimentation (detention) basins and/or straw bale filters will be constructed to prevent suspended sediments from reaching downstream watercourses or lakes, as required by the authorized officer.

- Actual construction activities will immediately follow clearing operations, especially in areas where soils are highly susceptible to wind or water erosion and other special areas.

Trenching and Preservation of Topsoil

To facilitate complete project site reclamation, topsoil will be removed from disturbed land within the project area as necessary. Topsoil stockpiles will be mulched as necessary and seeded to reduce wind and water erosion. Trenching methods and techniques would ensure that

- Topsoil will be removed from the trench area by double-ditching or other company proposed method approved by the authorized officer. Topsoil needs to be windrowed separately, protected, and replaced last during backfilling.

- Remaining unearthed materials will be removed and stored in a manner that facilitates backfilling procedures, uses a minimum amount of right-of-way area, and protects the excavated material from vehicle and equipment traffic.

- Cofferdams or other diversionary techniques will be used where necessary to permit flow in one part of a stream while pipelaying construction occurs in another part.

- A specific trenching and excavated material stockpiling procedure will be used on steep-sloping and rough, broken terrain to

ensure minimum disturbance as outlined in the CO plan. This procedure will be developed by both the authorized officer and the Company.

Backfilling and Grading

- Backfill will be replaced in a sequence and density similar to the preconstruction soil condition.

- Backfilling operations will be conducted in a manner that would minimize further disturbance of vegetation.

- The contour of the ground will be restored to permit normal surface drainage.

- In steeply sloping and steep terrain, erosion control structures such as water bars, diversion channels, and terraces will be constructed to divert water away from the pipeline trench and reduce soil erosion along the right-of-way and other adjoining areas disturbed during construction.

- All structures such as terraces, levees, underground drainage systems, irrigation pipelines, and canals will be restored to preconstruction conditions so that they function as originally intended.

- The surface will be graded to conform to the existing surface of the adjoining areas except for a slight crown over the trench to compensate for natural subsidence. In cropland areas, especially border- and furrow-irrigated cropland, the soils (backfill) within the trench would be compacted and the crown smoothed to match the bordering area to allow surface irrigation.

- Topsoil will be uniformly replaced over the trench fill and other disturbed areas to restore productivity to preconstruction conditions.

- Materials unsuitable for backfilling or excess backfill material will be disposed of as arranged by the authorized officer(s).

- Temporary work space or staging areas used at stream and highway crossings and other special sites will be restored to approximately preconstruction conditions and to the satisfaction of the authorized officer(s).

- The rights-of-way at stream crossings will be restored as nearly as possible to preconstruction state soon after completion of construction. The upland areas and banks will be revegetated to preconstruction conditions; where this is not possible, they will be mulched with rock. The size of the rock mulch will be large enough in diameter to stabilize the stream bank. The streambed will be returned to its original contours with sediments similar to those that were excavated and as approved by the authorized officer. All drainages crossed by the pipeline will be kept free of vegetative debris, and channels will be reopened following construction operations.

- For rights-of-way through steep terrain or wet areas, land must be graded at two elevations (two-toning), or diversion dams built, or other Company proposed methods used to facilitate construction, as approved by the authorized officer . After construction is completed, the areas will be contoured to resemble the original grade as nearly as possible and as agreed to by the authorizing officer in consultation with the Company.

Land Preparation for Seeding and Cultivation

Construction, backfilling, and grading commonly cause compaction and later soil conditions that could affect soil productivity and/or seeding success in the right-of-way area. The following practices and techniques will be used to improve these soil conditions, protect soil from erosion, and provide a favorable seedbed:

- In cropland areas, as required by the authorizing agency or landowner, subsoiling or chiseling will be used to ensure that soil compaction is reduced and preconstruction soil permeability, restored.

- Chiseling, ripping, or some other appropriate method may be required in rangeland areas to reduce compaction and improve soil permeability unless there are objections from the landowner or authorizing agency. Pitting on the contour furrowing as directed by the authorizing agency or landowner will be done on disturbed areas with steeper slopes to increase infiltration and to reduce runoff and erosion.

- Suitable mulches and other soil stabilizing practices will be used on all regraded and topsoiled areas to protect unvegetated soil from wind and water erosion and to improve water absorption. Areas and types of mulches will be identified by the Company in the CO plan and approved by the authorized officer.

- Special mulching practices or matting will be needed to protect seeding, seedlings after germination, and plantings in critical areas where wind and water are serious erosion hazards.

- Commercial fertilizers will be applied to soil areas with low inherent fertility and where woody materials are chipped and used as mulch, to maintain crop yields and establish grass seedings. Application rates will be commensurate with annual precipitation and available irrigation water. Areas needing commercial fertilizers will be identified by the Company in the CO plan.

- Seedbeds for areas seeded to grass will be prepared so that they will provide a suitable condition for the establishment of grass stands.

- Rock mulches may be used as determined in the CO plan in steep-sloping rock outcrop areas and low precipitation areas to reduce erosion and promote vegetation growth.

- Cultivation and land preparation operations on steeply sloping areas will be done on the contour to minimize erosion.

- Soil areas with rock fragments such as very coarse gravel, cobble, or stone scattered on the surface will be restored to the original preconstruction surface condition to blend with the adjoining area, to avoid a smooth surface right-of-way area, and to control accelerated erosion.

Revegetation (Reseeding and Planting)

All disturbed areas will be reshaped and revegetated as nearly as possible to their original condition or to a condition agreed upon by both the Company and the authorized officer. This reclamation will be accomplished as soon as possible after the disturbance occurs. Revegetation efforts will continue until a satisfactory vegetative cover is established. The following practices and techniques will be used in areas where reseeding is suitable, as determined by the authorizing agency:

- A firm seedbed will be prepared prior to seeding. This will include a mulch of plant residues or other suitable materials. A cover crop may be needed in larger disturbed areas.

- Seed will be planted by drilling, broadcasting, or hydroseeding. Wherever possible, planting will be done with a drill. Drill seeding with a grass drill equipped with depth bands will be used where topography and soil conditions allow, to meet the seeding requirements of the species being planted. Broadcast seeding will be used in inaccessible or small areas when broadcasting the amount of seed used in drilling will be doubled. Seed will be covered by raking or harrowing. Critical areas will be hydroseeded as determined by the reclamation specialist or authorized officer.

- Only species and varieties of species adaptable to local soil and climatic conditions will be used; generally these would be native species. However, introduced species may be considered for specific conditions when approved by the landowner and regulatory authority. Seeding rates in critical area plantings and generally throughout the right-of-way will be increased 100 percent over regular seeding rates in order to compensate for seed mortality from adverse growing conditions.

- Seed testing will be conducted to meet federal, state, and agency seed requirements.

- Seeding will be done when seasonal or weather conditions are most favorable, and as determined by the landowner or authorized officer.

- Grazing or mowing will be delayed at least one season after seeding, especially in highly erodible areas, in order to provide time for vegetation to become established unless otherwise

agreed upon by the landowner or lessee and the authorized officer. Protective fencing may be necessary in special areas as agreed upon and will be constructed, maintained, and removed according to authorizing agency or landowner specifications.

- In areas of low annual precipitation (generally less than 8 to 10 inches), where reseeding is not suitable or as successful, erosion control structures and measures will be applied on sloping areas to reduce accelerated erosion and to allow reestablishment of preconstruction surface soil conditions and natural revegetation.

- Trees and shrubs will be reestablished in areas as specified in the revegetation plan. Temporary and/or permanent structures will be installed by the Company at specific locations along the right-of-way and other disturbed sites to prevent off-road vehicle access.

Maintenance and Monitoring

Joint inspection of the reclaimed areas by the applicant and authorized officer will be conducted to monitor the success and maintenance of erosion control measures and revegetation programs on native grazing land for a period determined by the landowner on private land or the authorized officer on state or federal land. The monitoring program would identify problem areas and corrective measures to ensure cover and erosion control. Certification of successful revegetation and erosion control will be determined by the landowner or authorized officer.

Use of Biochemicals

The use of biochemicals such as herbicides, fungicides, and fertilizers will comply with state and federal laws, regulations, and policies regarding the use of poisonous, hazardous, or persistent substances. State and federal wildlife agencies will be contacted if application of any of these substances will be on or near sensitive wildlife areas. These substances will be applied by ground methods. Before these substances are used on or near the permit or grant area, the Company will obtain approval of a written plan for such use from the authorized officer, landowner, or appropriate wildlife agency. The plan will outline the kind of chemical, method of application, purpose of application, and other information as required, and will be considered as the authorized procedure for all applications until revoked by the authorized officer, landowner, and/or appropriate wildlife agency. This plan will become part of the CO Plan.

COMPANY STANDARD CONSTRUCTION AND OPERATION PROCEDURES DESIGNED TO REDUCE ENVIRONMENTAL IMPACTS

The Company has stated that the following procedures will be followed in the construction of the proposed Rangely Carbon Dioxide Pipeline project.

Construction Timing

1. Right-of-way construction will be scheduled to avoid critical wildlife habitats during primary use periods as identified in BLM Management Framework Plans and state wildlife agency recommendations.

2. Pipeline construction activities on irrigated cropland will be timed, as nearly as possible, in order to avoid disruption of irrigation delivery systems during the major irrigation season and to reduce effects on crop production in construction areas as well as adjoining irrigated cropland areas served by the systems.

3. Pipeline construction activities in narrow floodplain areas subject to high erosion hazards will be timed in order to avoid high water flows as much as possible, which will reduce the effects of construction on erosion and sedimentation.

Construction Procedures

1. The Company will adhere to Occupational Safety and Health Administration rules and regulations during the construction and operation phases.

2. All culverts, bridges, and ditches will be designed to pass the appropriate peak runoff event. This will vary from a 10- to a 100-year event as presented by the Company in the CO plan and approved by the authorized officer.

3. Where fences are encountered along the rights-of-way, adequate bracing will be installed at each edge of the right-of-way before wires are cut and temporary gates installed. At the completion of construction, the opening will be closed using fencing of a quality equal to or greater than that of the original fencing.

4. Where blasting is necessary, the Company will adhere to the following safety precautions in all instances.

   - In areas of human use, shots will be blanketed (matted).

   - Landowners or tenants in close proximity to the shot will be notified in advance so that livestock and other property can be adequately protected.

   - Before detonation, a clearance will be made to ensure that construction personnel and local residents are removed from the blast area.

5. When required, materials for approaches and fill will be obtained from: (a) the right-of-way; (b) commercial sources (which would require transportation to the location); or (c) adjacent lands where permitted by the federal surface management agency or the landowner.

6. In remote areas with no existing access roads, the pipeline right-of-way will be the primary path of surface travel for pipeline construction. Generally, roadbeds supporting paved roadways

will be crossed by boring beneath the bed and inserting casing pipe rather than by ditching across the surface.

7. Stream gradients will be maintained by removing all spoil from the bed upon completion of construction. Banks will be restored to resemble their original grade, and sand-cement sacks, breakers, or riprap will be placed over the pipeline where necessary.

8. Structures will be painted in neutral tones, except where required for safety.

Operation and Maintenance

1. Permanent access along the pipeline right-of-way will not be maintained. Temporary permits will be obtained for areas where existing roads or trails cannot be used for emergency access.

2. If herbicides are required for suppression of weeds around project components, they will be applied in accordance with manufacturer's recommendations and in accordance with federal and state regulations.

Abandonment

1. Foundations will be broken and buried. Topsoil will be spread over disturbed areas. Mulch, at the rate of 2 tons per acre, will be spread over the topsoil and anchored with a crimping disc prior to seeding.

2. Seeding will occur after October 15 so all winter and spring moisture can be used. Seeding will normally be done by drilling, but steep slopes and small areas may be seeded by manual broadcasting at twice the seed rates. If broadcast, the seeds will be covered by dragging, chaining, raking, or other means.

SPECIAL FEDERAL MITIGATION MEASURES

The following mitigation measures were identified during the process of impact analysis for the Chevron Phosphate Project to further alleviate or minimize potential environmental effects from the proposed developments. The federal agencies are committed to these measures and the measures will become stipulations attached to any right-of-way grants that may be issued for both the Chevron Phosphate and Rangely CO_2 Pipeline projects. These measures apply to the Proposed Action and Sand Wash Alternative as appropriate, and are in addition to the standard measures.

Chevron will be required

- to temporarily deter the sediment that could result from construction on the Red Creek Basin Escarpment.

- To build two check dams on the major drainages coming from the escarpment to allow for stabilization. The dams will have a sufficient capacity to handle runoff. Design specifications will be determined during preparation of the CO plan.

- to reduce the possibility of sloughing and resulting sediment from the wet areas on the Red Creek Basin Escarpment. Horizontal drains or other appropriate techniques will be employed that will outlet on the surface onto a riprap apron. Design specifications will be determined during preparation of the CO plan.

- to surface (gravel) all permanent roads that will be used on continuous basis during operation of the project. This will minimize rutting and erosion during wet periods.

- to oil or water all soft-surfaced major access roads as may be required during construction, including those used during the primary recreation seasons from May through September, to keep visibility impacts from dust to a minimum.

- to minimize road cuts and fills when constructing new roads or upgrading existing areas to minimize the contrast in landform modification and contrast for the visual resource.

- to double cut ends of culverts to match the road cut slopes, or to use preformed end sections when installing culverts for roads in areas of high or medium visual sensitivity in order to reduce the visual contrast caused by the addition of a structure to the landscape.

- to ensure that the people in Browns Park and Dutch John and all other people of concern within Daggett County are notified of any road closures in Jesse Ewing Canyon.

- to ensure periodic access through Jesse Ewing Canyon during the work day, especially for emergencies, and after the work shift each night.

- to use self-weathering steel for guard rails if the authorized officer deems guard rails are necessary, in areas of high or medium visual sensitivity in order to reduce the visual contrast caused by the addition of the structures to the landscape.

- to use long spans at right angles, when feasible, where power distribution lines unavoidably cross roads in areas of high or medium visual sensitivity in order to minimize the visual constrasts to form, line, and color from the added structures and conductors.

- to locate the pipeline as close as possible to existing pipelines as determined by the authorized officer in order to reduce the width required for the corridor.

- to blend pipeline clearings with natural vegetative clearings and patterns so that they are natural in appearance, or to place pipelines along existing side roads to minimize visual contrast with the natural landscape.

- to use proper trenching and backfill techniques to replace soils (in areas where subsoil colors are different from surface solid colors or where visual sensitivity is high or medium) so color contrasts do not result in lessening the visual quality of an area.

- within the Rye Grass Draw area as viewed from the Green River and north of Jesse Ewing Canyon, apply special measures, such as removing additional vegetation or applying soil additives, to reduce the visual color contrast between the cleared rights-of-way and existing vegetation, as directed by the authorized officer.

STATE OF WYOMING, OFFICE OF INDUSTRIAL SITING ADMINISTRATION (ISA), PERMIT CONDITIONS TO MITIGATE ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS OF THE CHEVRON PHOSPHATE PROJECT

The following conditions were required by the State of Wyoming, Office of Industrial Siting Administration (ISA) for the Chevron Phosphate Project. These measures were included in this EIS because with their application the cumulative impacts of the Proposed Action plus the Chevron Phosphate Project would be less.

1. The Applicant will participate in the development and implementation of a mitigation program to address project-related impacts on the Wyoming Game and Fish Department. If a temporary warden position is required during construction and funding is unavailable from other sources, the Applicant will fund a temporary position for that time.

2. The Applicant will coordinate with the Wyoming Game and Fish Department regarding scheduling of construction activities in the Red Creek Badlands and in other important big game ranges, and will follow the reasonable recommendations of the Wyoming Game and Fish Department in consultation with BLM regarding scheduling of activities in these areas.

3. Applicant's contractors and subcontractors shall establish payroll and general disbursement accounts at banks in Rock Springs to the extent practical during the construction and operation phases of the project. Chevron shall establish general disbursement accounts to the extent practical. During the operational phases of the project, Chevron will maintain a local account.

4. The Applicant, its contractors, and subcontractors, shall have a sales and use tax license for Sweetwater County. Before construction, the Applicant will participate in the information seminar conducted by the State Department of Revenue.

5. Since construction of the facility will generate impact assistance payments, the Applicant shall report to the State Treasurer, the Department of Revenue and Taxation, and the ISA when construction commences and when construction is 90 percent complete.

6. The Applicant shall not exceed the number of estimated construction or operation employees by more than 10 percent without amending the permit pursuant to Section 12 of the ISA Rules and Regulations.

7. The Applicant shall work closely with the County Commissioners of Sweetwater County to mitigate unforeseen impacts if they occur. The Applicant will monitor medical personnel in relationship to needs during the construction period.

8. The Applicant will guarantee $1.2 million of new revenue to the City of Rock Springs during the construction period. Most or all of this new revenue will be in the form of special impact assistance payments from the State of Wyoming. In the event the special impact assistance revenues are less than the projected $1.2 million, the Applicant will make up the difference. The Applicant and the City of Rock Springs will agree prior to construction on the annual distribution of the guarantee during the construction period.

9. Chevron shall ensure adequate housing for project construction workers, supervisory personnel, and permanent employees. This shall be done in a manner that avoids tightening the local housing market to the extent that housing is unavailable to other residents in the community. The housing plan will include an expanded construction camp, mobile home pads, and recreational vehicle spaces. Before existing housing is used, it must be demonstrated to the ISA that existing and anticipated housing supplies are adequate to provide Chevron required housing and meet secondary demands as well.

10. The Applicant will work closely with officials of School Districts 1 and 2 and will monitor the number of project-related students enrolled in each District during the construction period. If unexpected, adverse impacts occur as a result of the Chevron project, the Applicant will work out a mitigation program to the satisfaction of the appropriate School District, or the question may be referred to the Industrial Siting Commission (ISC).

11. Chevron will construct turn lanes, acceleration/deceleration lanes, and through traffic lanes at the Highway 430/Chevron Phosphate Project plant site access intersection to alleviate potential transportation congestion and safety hazards. The Applicant will continue to work closely with the Wyoming Highway Department to mitigate any problems which might develop at either the plant intersection or the Highway 430 belt route. The Applicant will work closely with the County Engineer in the analysis, planning, and construction of County Road 4-27. Disagreements between the Applicant and the Highway Department or the County Engineer may be referred to the ISC.

12. The Applicant shall develop a two-level monitoring system to determine the direct project-related impacts on

affected communities in the area of site influence. Project-related data will be gathered on new employees. In addition, community-specific data on select public services, school enrollments, housing stock, and housing availability will be compiled on a quarterly basis. If monitoring indicates significant deviations from the projected new project-related impact, monitoring of other socioeconomic indices will be triggered to the extent they may be applicable to the problem. The Phase II variables will include revenue and expenditures, medical services and personnel recruitment, human services, capital facilities/personnel, and banking and availability of credit. Monitoring will be carried out in close cooperation with the Sweetwater County Association of Government's monitoring program and with the City of Rock Springs' planning office. Reports will be published on a quarterly basis until commercial production levels are reached at the phosphate fertilizer plant.

13. The Applicant will take reasonable action to obtain qualified workers from the local area and dissuade large numbers of job seekers from coming to the local area.

14. If adverse socioeconomic impacts occur which have not been predicted and for which no mitigation plan is in place and which are the direct result of the proposed project, the matter may be referred to the ISC for resolution, if it has not been resolved by community and Company officials. The ISC may require mitigative assistance from the project only if no alternative funding is available.

15. Because construction of the project may be delayed for a period of time from the schedule set forth in its application, the Applicant shall take the following actions to ensure that socioeconomic impacts are adequately mitigated.

    a. As soon as possible, but no later than 120 days before construction, the Applicant shall notify the ISA of its proposed construction schedule.

    b. At the time of notification, the Applicant shall consult with ISA to determine whether any socioeconomic conditions must be reevaluated and mitigation plans adjusted because of significant changes in socioeconomic conditions.

    c. No later than 60 days before construction, the Applicant shall have completed, and provided to ISA for review, any required reevaluation of socioeconomic conditions and proposed adjustments to the mitigation plans.

    d. As soon as practical, but before construction, the Applicant shall, pursuant to Section 12.b of the ISA Rules and Regulations, request an amendment of its permit by presenting to the ISC its proposed construction schedule and any reevaluation of

socioeconomic conditions and adjustments of mitigation plans, and

e. A public hearing will be held if determined appropriate by ISC in accordance with Section 12/b provided, however, the ISC shall undertake all reasonable steps to schedule the hearing, if required, so as not to delay construction of the project.

Phase I

(Variables will be monitored for Sweetwater County, Rock Springs, Green River, and School Districts 1 and 2, where appropriate.)

A. Economic and Demographic Conditions

1. Chevron Chemical Phosphate Project employment and associated characteristics:

a. Occupation
b. Age
c. Sex
d. Marital Status
e. Residence of family
f. Number of children and ages
g. Local residence and mode of travel (commuting patterns)
h. Type of residence
i. Anticipated length of residence
j. Length of residence in the area
k. Previous residence
l. Employee turnover
m. Future personnel requirements

2. Other basic employment

3. Secondary employment

B. Housing

1. Occupancy rates for housing, by type
2. Number of units available by location and type
3. Requests for housing
4. Vacancies in the existing housing stock and local housing conditions

C. Public Services

1. Education

a. Total enrollments
b. Project-related enrollments
c. Student-teacher ratios
d. Facilities capacity
e. Budgetary status

2. Public Safety

a. Number of arrests, by category
b. Number of fire calls, by type and fire station
c. Number of ambulance calls

3. Revenue and Expenditures

a. Sales and use tax (total and project-related)
b. Impact assistance tax
c. Budgetary status

4. Health and Social Services

a. Department of Public Assistance and Social Services

(1) Service caseloads
(2) Intakes on income maintenance

(3) Day care facilities and rates of use

b. Mental Health Center

(1) Total number of incidences of treatment
(2) Caseloads
(3) Number of project-related cases
(4) Number of crisis-oriented cases
(5) Number of substance abuse cases

c. Health Care

(1) Hospital
(a) occupancy rate
(b) need for allied health professionals
(2) Physician Recruitment program

5. Game and Fish Management

Number of violations, by type

Phase II

(Variables will be monitored if Phase I monitoring indicates significant problems in any area; one or more of the following variables may be monitored to the extent that they may be applicable to the problem.)

A. Human Services

The Company would check with the following services on a quarterly basis for any adverse impact:

1. Job Service
2. Probation and Parole
3. Sweetwater County Task Force on Sexual Assault
4. Southwest Wyoming Rehabilitation Center
5. Sweetwater County Child Development Center
6. YWCA (Young Women's Christian Association)
7. Vocational Rehabilitation
8. Southwest Wyoming Alcoholism Rehabilitation Association
9. Family Planning/Western Wyoming Women's Resource Center
10. Volunteer Information and Referral Service

(The analysis would include the following: Service volume by program, full-time personnel available per program, budget, and adequacy of space and facilities.)

B. Revenue and Expenditures

(In Phase II, a more in-depth revenue and expenditures analysis will be taken for the political entity adversely affected as indicated by Phase I monitoring. In addition to information collected in Phase I, the following information will be collected.)

1. Per capita operating and capital expenses
2. Bond capacity
3. Total grants and state or federal funds received

C. Banking

Availability of home mortgage money and interest rates

*U.S. GOVERNMENT PRINTING OFFICE: 1985-0-576-070/10035

United States Department of the Interior
Bureau of Land Management
Denver Service Center
Division of EIS Services
555 Zang St. – First Floor East
Denver, CO 80225

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

FIRST CLASS MAIL
POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR
PERMIT NO. G—76